

*Prepared for*

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## **ADDITIONAL OFF-PROPERTY INVESTIGATION REPORT**

**Former McKesson Chemical Company Facility**  
**9005 Sorensen Avenue**  
**Santa Fe Springs, California**

*Prepared by*

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engineers | scientists | innovators

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18 October 2007

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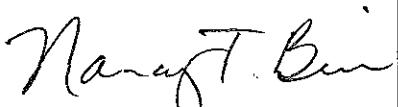
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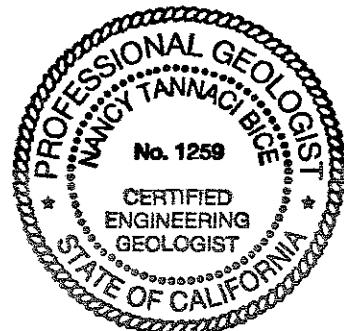
18 October 2007



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## 1. INTRODUCTION

This report describes the additional activities that were performed in March 2007 to further evaluate the off-property presence of volatile organic compounds (VOCs) in groundwater in the vicinity of the former McKesson Chemical Company facility located at 9005 Sorensen Avenue, Santa Fe Springs, California (the Site).

In response to a request by the California Department of Toxic Substances Control (DTSC) in its letter dated 1 April 2004, Geosyntec submitted an Off-Site Groundwater Investigation Work Plan (Work Plan) on 21 May 2004 (GeoSyntec, 2004). The Work Plan was approved by DTSC on 21 July 2004 (DTSC, 2004). Implementation of the investigation proposed in the Work Plan was conducted in December 2004 and February 2005 and the results were presented in the Off-Property Investigation Report dated 3 May 2005 (Geosyntec, 2005). The Off-Property Investigation Report recommended additional investigation farther downgradient of the Site.

Following its review, DTSC provided comments on the report in a letter dated 21 July 2006. Based on its review of the Off-Property Investigation Report, in a meeting between DTSC and McKesson on 19 October 2006, DTSC agreed that additional downgradient work was warranted and requested that McKesson submit a letter stating that the additional sampling would be conducted in accordance with the previously approved Work Plan and a map showing the proposed additional sampling locations. In response to this request, Geosyntec submitted the Additional Off-Property Investigation Work Plan on 14 December 2006 (Geosyntec, 2006), which was approved by DTSC in a letter dated 31 January 2007 (DTSC, 2007a). Implementation of the additional investigation was conducted in March 2007 and the results are presented herein.

The remainder of this Report is organized into the following sections:

- Section 2, “*Background*,” provides a brief summary of the Site history, environmental setting, distribution of chemicals in groundwater, upgradient contributions of chemicals to groundwater, remedial activities performed at the Site to date, and a summary of previous off-property investigations;
- Section 3, “*Additional Off-Property Investigation*,” describes the field activities, sampling methods, and the EPA methods used by the laboratory to analyze the groundwater samples;



- Section 4, "*Results*," presents the results of the investigation and a summary of the quality control review performed on the laboratory analytical data;
- Section 5, "*Conclusions and Recommendations*," summarizes the findings discussed in the report.

References, tables, figures, and appendices are presented at the end of this report.

## **2. BACKGROUND**

McKesson Chemical Company, a former division of McKesson, leased the Site and operated a bulk chemical repackaging facility from 1976 to 1986. Chemicals were stored in both aboveground and underground storage tanks (ASTs and USTs, respectively) and piped to packaging areas. Bulk chemicals were transported to and from the facility by truck and rail.

Operations at the facility ceased in November 1986 as a result of McKesson's sale of substantially all of the assets of its chemical company. At the time of closure, all USTs and ASTs were emptied. McKesson began investigations at the Site in June 1984. A Revised Remedial Investigation (RI), including a Baseline Risk Assessment, and a Feasibility Study (FS) for soil were completed in 1992 and approved by DTSC. A Remedial Action Plan (RAP) for soil was approved by DTSC in 1993 and soil remediation efforts began in 1994. An Interim Remedial Measure (IRM) Workplan for groundwater was approved by DTSC in 1996 and groundwater remediation efforts began in 1998. All of these investigative and remedial activities were overseen by DTSC.

### **2.1 Site Hydrogeology**

Groundwater at the Site and vicinity has been identified in three zones to a depth of 140 feet bgs: the shallow zone, the A zone (subdivided into the A<sub>1</sub> and A<sub>2</sub> zones), and the B zone. The three zones, which are illustrated above, are characterized by the following depth intervals beneath the Site:

- The shallow zone is a silty sand unit that is part of the Gage Aquifer and is present between depths of approximately 25 and 35 feet bgs;
- The A<sub>1</sub> zone is a sand unit that is part of the Hollydale Aquifer and is present between depths of approximately 45 and 75 feet;
- The A<sub>2</sub> zone is a sand unit that is also part of the Hollydale Aquifer and is present between depths of approximately 90 and 120 feet bgs; and
- The B zone is a sand unit that is part of the Jefferson Aquifer and is present at depths greater than 135 feet bgs.

With the exception of one shallow well at the northeast corner of the Site, groundwater is present in a transient state in the shallow groundwater zone only after periods of significant rainfall. When present, groundwater in the shallow zone ranges in elevation from 112 to 116 feet above mean sea level (msl) (Geosyntec, 2007b).

Groundwater in the A<sub>1</sub> zone ranges in elevation from its current level of approximately 95 feet above msl to past maximum elevations of 120 feet above msl (Geosyntec, 2007b). Groundwater elevations in the A<sub>2</sub> zone are similar to those in the A<sub>1</sub> zone. Since 1991, the groundwater flow direction generally has been observed to be toward the southwest in the A<sub>1</sub>, A<sub>2</sub>, and B zones.

## **2.2 Distribution of Chemicals in Groundwater**

The following sections summarize the distribution of chemicals in the groundwater beneath and in the vicinity of the Site.

### **2.2.1 On-Site Distribution**

Extensive characterization has been performed at the Site since the mid-1980s. An initial Site investigation around the former solvent AST area was conducted in March 1986 (McKesson, 1986). The investigation included completion of three slant borings (SB1, SB2, SB3), installation of four monitoring wells (PIMW-1 through PIMW-4), and laboratory analysis of six soil samples and three groundwater samples. VOCs, primarily chlorinated solvents, were detected in the soil and groundwater samples collected from the borings and monitoring wells. Groundwater levels were measured at a depth of approximately 26 to 27 feet bgs and indicated a flow direction to the southwest. Based on the results of the initial investigation, McKesson indicated it was preparing a plan for further site investigation.

During the RI performed by Harding Lawson Associates (HLA) between June 1990 and February 1991, 41 soil borings were drilled and sampled and 18 groundwater monitoring wells were installed on the Site. Soil samples were analyzed for VOCs, semi-volatile compounds, glycols, petroleum hydrocarbons, pH, and selected ions and metals. Groundwater samples from monitoring wells were analyzed for VOCs, semi-volatile compounds, petroleum hydrocarbons, glycols, pH, conductivity, total dissolved solids, sulfate, surfactants, general minerals, and selected metals to evaluate the Site for spills or releases of chemicals and to evaluate the distribution in groundwater. Based on

the results of the RI, the chemicals of concern (COCs) in soil and groundwater were identified as follows:

- 1,1,1-TCA;
- PCE;
- TCE;
- Methylene chloride;
- 1,1-Dichloroethene (1,1-DCE);
- 1,2-Dichloroethene (1,2-DCE);
- 1,1-Dichloroethane (1,1-DCA);
- 1,2-Dichloroethane (1,2-DCA); and
- Vinyl chloride.

The environmental investigations indicated the presence of these VOCs in soil, with the highest concentrations detected in the soil column beneath the former solvent AST area. The highest VOC concentrations in groundwater were also found beneath the former solvent AST area.

To supplement the data collected from the on-Site wells, additional groundwater samples were collected from the A<sub>1</sub> zone in September and November 1991 at 17 locations using a Hydropunch® sampling system (Figure 2) (HLA, 1992). Eight of the seventeen locations (CPT-11 through CPT-18) were advanced south and west of the McKesson Site. The investigation indicated the presence of VOCs off-Site toward the south-southwest (Appendix A).

In response to DTSC's request, to further evaluate the presence of VOCs to the south-southwest of the Site, additional multi-level groundwater samples were collected from twelve locations (Figure 2) in December 2004 and February 2005 (Geosyntec, 2005). The results of the further investigation indicated the presence of a narrow zone of VOC concentrations exceeding 1,000 ug/L southwest of the Site.

Based on available data, the lateral distribution of VOCs in the A<sub>1</sub> zone groundwater is characterized by higher concentrations in samples from beneath the former solvent AST

area, with lateral migration toward the south-southwest. The vertical distribution in groundwater is characterized by higher concentrations in samples from the shallow and A<sub>1</sub> zones, with significantly lower concentrations (approximately three orders of magnitude lower) detected in the A<sub>2</sub> zone (Geosyntec, 2007a).

### **2.2.2 Upgradient Contribution**

VOCs have also been detected in monitoring wells located upgradient and transgradient of the former solvent AST area, indicating contributions from off-Site sources (Geosyntec, 2007b). Adjacent and north of the Site is the former Angeles Chemical Company facility (Angeles), which operated as a chemical repackaging facility from 1976 to 2000. A total of 33 USTs existed at the property, with an additional UST used as containment for surface runoff, chemical spillage, and line flush storage and railcars used for storage. Chemicals stored at the former Angeles site included, but were not limited to, acetone, methylene chloride, 1,1,1-TCA, PCE, MEK, toluene, xylenes, kerosene, diesel, and unleaded gasoline. Subsurface investigations were initiated at the property in 1990. Investigators at the site concluded that VOCs had impacted soil and groundwater beneath the property; sources included surficial spillage from chemical transfers along the northern railroad tracks and leakage from the secondary containment tank pipes (Blakely, 2001; DTSC, 2007b). Floating product containing chlorinated VOCs as well as petroleum hydrocarbons has been observed in a number of the Angeles wells. Product removal efforts have been ongoing since approximately 1999. Soil vapor extraction was initiated in 2005, operated intermittently and stopped operating in December 2006. No groundwater containment has been implemented at this property.

The Omega Chemical Superfund Site (Omega) is located approximately 1½ miles northeast of the Site. The Omega Chemical Corporation operated from 1976 to 1991 at 12504 and 12512 E. Whittier Boulevard in the City of Whittier. During its years of operation, drums and bulk loads of waste solvent and chemicals from various industrial activities were processed to form commercial products. Site investigations indicate the subsurface soil and groundwater at the Omega property are contaminated with high concentrations of PCE, TCE, other chlorinated hydrocarbons and Freon. Based on the results of investigations conducted on and downgradient of the Omega site, a regional groundwater plume has been interpreted to extend beneath and past the former McKesson Site to the southwest (DTSC, 2007b).

### **2.3 Remedial Activities**

In 1990, the ASTs at the McKesson Site were removed and in 1996, the USTs were removed. Since 1994, remedial activities have been ongoing at the former McKesson Site to reduce the mass of VOCs in the source area and to prevent high concentrations of VOCs from migrating off of the Site. These activities include: soil vapor extraction (SVE) and treatment, groundwater extraction and treatment, and a bioremediation pilot study.

Operation of the stand-alone SVE system began in March 1994 and continued through June 1995. Extraction was restarted in 1998 as part of the interim groundwater remediation system, and in 2003 two additional extraction wells were added to the system to remove additional mass near the former solvent ASTs. The SVE system currently consists of four extraction wells E-1, E-2, E-3, and MW-11s (Figure 2). Soil vapor is extracted from these wells at a total flow rate of approximately 40 standard cubic feet per minute (scfm) and is treated with a catalytic oxidizer and scrubber and then discharged to the atmosphere under a permit from the South Coast Air Quality Management District.

Groundwater extraction and treatment began in March 1998 from extraction well EW-1, located in the southwestern, downgradient corner of the Site. The conceptual design of the Interim Remedial Measure (IRM) was to contain and capture affected groundwater within the A<sub>1</sub> zone that was migrating from the former AST area and potentially the UST area. The groundwater extraction system now consists of three extraction wells, EW-1, SB-23, and PS-INJ (Figure 2). Groundwater is extracted from these wells at a total flow rate of approximately 40 gallons per minute (gpm) and is treated with an air stripper (off-gas is treated along with the soil vapor) and discharged to the sanitary sewer.

A total of 32 groundwater monitoring wells have been installed to monitor the chemistry and flow of groundwater beneath the Site.

### **2.4 Summary of Previous Off-Property Investigations**

An initial off-property investigation was conducted in 1991 as part of the RI. Results of the sampling identified VOCs in groundwater to the south-southwest of the Site. In December 2004 and February 2005, an additional off-property investigation was



conducted at DTSC's request to further evaluate the presence of VOCs in groundwater emanating from the Site and/or other potential upgradient sources. The results of the additional sampling indicated the presence of a narrow zone of VOC concentrations exceeding 1,000 ug/L southwest of the Site. Based on the results of the investigation (Geosyntec, 2005), additional sampling farther downgradient from the Site was conducted in March 2007, the results of which are presented in the following sections.

### **3. ADDITIONAL OFF-PROPERTY INVESTIGATION**

The following sections describe the scope of work completed as part of the additional off-property investigation, including pre-field activities, sampling methods, laboratory analytical methods, and quality control procedures.

#### **3.1 Pre-Field Activities**

##### **3.1.1 Permitting**

The eight CPT soundings (CPT-31 through CPT-38) were located downgradient of the Site in public right-of-ways maintained by the City of Santa Fe Springs. Prior to the field activities, drilling permits were obtained for the advancement of CPT borings and the collection of groundwater samples from the Los Angeles County Mountain & Rural Programs Environmental Health Division. Additionally, encroachment permits were obtained from the City of Santa Fe Springs. Copies of the permits are included in Appendix A.

##### **3.1.2 Utility Clearance**

An independent subsurface utility locating service (Spectrum Geophysics of Simi Valley, California) was subcontracted to perform a geophysical survey in the vicinity of each sampling location to assess the presence of utilities, pipelines, or other subsurface obstructions. Additionally, Underground Service Alert (USA) was also notified 48 hours prior to commencing subsurface sampling activities. USA member agencies marked the location (or confirmed the absence) of their underground facilities adjacent to each proposed boring location. No utilities were damaged during field activities.

#### **3.2 Cone Penetrometer Testing**

Eight CPT soundings (CPT-31 through CPT-38) were advanced by Gregg Drilling & Testing, Inc. of Signal Hill, California between 12 and 14 March 2007 at the locations shown on Figure 2. Four locations (CPT-31 through CPT-34) were advanced on Altamar Place and four locations (CPT-35 through CPT-38) were advanced on Dice Road.

Each CPT sounding was advanced to a total depth ranging from approximately 73 to 85 feet below ground surface (bgs). At each CPT location, a steel cone was advanced into the subsurface at a rate of approximately 5 centimeters/second, while sensors in the cone continuously collected and recorded tip resistance, sleeve friction, and pore pressure. The ratio of the tip pressure to the sleeve friction provided information to interpret soil type. Recorded pore pressure measurements provided general information regarding the occurrence of groundwater in the subsurface. CPT logs for the eight soundings are included in Appendix B.

Once the total depth was reached, the downhole equipment was removed and the hole was backfilled via a tremie pipe with a cement/bentonite grout and the surface was restored to its previous condition.

### **3.3 Groundwater Sampling**

At each CPT location, a second borehole was advanced within a 5-foot radius for collection of groundwater samples. Based on the recorded pore pressure information from the CPT, at least two groundwater samples (i.e., at first groundwater and at the depth of the second zone of higher pore pressures) were collected from each location using a Hydropunch® groundwater sampler.

The groundwater sampler was equipped with a retrievable stainless steel or disposable PVC screen and an expendable steel tip. This type of sampler allowed for samples to be collected at multiple depth intervals within the same sounding location. The sampler operates by advancing small diameter hollow push rods with the filter tip in a closed configuration to the base of the desired sampling interval. Once at the desired sample depth, the push rods were retracted; exposing the encased filter screen allowing groundwater to infiltrate from the formation into the inlet screen. The inlet screen was approximately 5 feet in length and the depths of groundwater samples are reported as the bottom of the screen interval. Bailers (lowered through the push rods into the screen section) were used to retrieve the groundwater samples.

Retrieved groundwater samples were transferred into laboratory-prepared sample containers appropriate for the intended analysis. The samples were labeled, placed in individual Ziploc bags, packaged with bubble wrap, and stored in an ice-cooled chest maintained at approximately 4°C, for transport under chain-of-custody procedures to the analytical laboratory. Sample containers were labeled with project identification,



sample location, analytical parameters, date and time sampled and the preservative added to each sample. The groundwater samples were shipped to Columbia Analytical Services, a California-certified analytical laboratory, in Canoga Park, California. The groundwater samples were analyzed for VOCs using EPA Method 8260B. Trip blanks were also analyzed by the laboratory as part of the quality assurance/quality control (QA/QC) program.

## 4. RESULTS

The following sections present the results of the additional off-property investigation and a summary of the quality control review performed for the laboratory analytical data.

### 4.1 Hydrogeology

The CPT soundings conducted as part of the investigation provided valuable information on the lithology of the upper 85 feet of sediment downgradient of the Site (Figure 2). Geologic cross sections A-A' and B-B', which are presented as Figures 3 and 4, respectively, illustrate the key stratigraphic units in the vicinity of the Site. The cross sections include information collected during this recent investigation. Stratigraphic layering in the cross sections was based on interpolation between boring and CPT locations.

The stratigraphic layers in the upper 85 feet farther downgradient from the Site were observed to be fairly consistent in all of the CPT soundings and can be generalized as follows:

- Layer 1: 0 to 5 feet bgs - consists of discontinuous layers of unsaturated sandy silt, silt, silty clay, and clay;
- Layer 2: 5 to 20 feet bgs - consists of unsaturated, interlayered silty sand and coarse-grained sand;
- Layer 3: 20 to 40 feet bgs - consists of discontinuous layers of unsaturated silt and clay units;
- Layer 4: 40 to 85 feet bgs - consists of saturated coarse-grained sand with layers of silty sand.

This stratigraphic layering is generally consistent with the lithology observed in previous CPT soundings and borings advanced beneath the Site (HLA, 1992 and Geosyntec, 2003) and downgradient from the Site (Geosyntec, 2005).

Recorded pore pressure measurements for each CPT sounding provided general information regarding the occurrence of groundwater. Groundwater was first sampled

at approximately 50 feet bgs. Multiple attempts were made at various locations to collect groundwater samples between 45 and 48 feet bgs, however, no groundwater was encountered.

#### **4.2 VOC Distribution in Groundwater**

The analytical results for groundwater samples collected during this investigation are presented in Table 1 and Figures 5 through 19. The laboratory analytical reports are included in Appendix D. The results of the Hydropunch sampling identified the following VOCs:

- PCE;
- TCE;
- 1,1,1-TCA;
- 1,1-DCA;
- 1,1-DCE;
- cis-1,2-DCE;
- Vinyl chloride
- Freon-11; and
- Freon-113.

Other VOCs were detected in a small number of samples as shown in Table 1. With the exception of PCE and 1,1,1-TCA, VOC concentrations in samples collected from the two downgradient transects, located approximately 1,500 feet from the Site, were similar to those concentrations observed in samples collected upgradient of the Site along Sorensen Avenue (CPT-27 through CPT-30) (Figures 5 through 13) and were significantly lower than those collected along the previous off-Property transect, located approximately 750 feet from the Site. PCE concentrations observed 1,500 feet downgradient ranged from non-detect levels (<0.38 ug/L) to 690 ug/L as compared to upgradient concentrations along Sorensen Avenue, which ranged from 16 to 160 ug/L. PCE was detected at the highest concentrations (690 ug/L, 600 ug/L, and 280 ug/L) in the samples collected at a depth of approximately 55 feet bgs in CPT-31, CPT-32, and CPT-33, respectively (Figure 5), in a more southerly direction than would be expected

given the westerly component of the hydraulic gradient in the Site vicinity. As illustrated on Figure 5, PCE concentrations in the samples collected from the borings to the west and northwest of CPT-33 were lower and more consistent with concentrations observed upgradient along Sorensen Avenue.

1,1,1-TCA concentrations observed 1,500 feet downgradient ranged from non-detect levels (<0.46 ug/L) to 290 ug/L as compared to upgradient concentrations along Sorensen Avenue, which ranged from non-detect (<0.5 ug/L) to 26 ug/L. 1,1,1-TCA was detected at the highest concentrations (95 ug/L and 290 ug/L) in the samples collected from CPT-31 at depths of 55 and 66 feet bgs, respectively (Figure 6), again in a more southerly direction than would be expected. At the other seven investigation locations to the west and northwest of CPT-31, observed concentrations of 1,1,1-TCA were similar to those observed upgradient along Sorensen Avenue.

As shown on Figures 7 through 10, several common degradation (or daughter) products of PCE and 1,1,1-TCA were detected in the groundwater samples collected during the investigation, including TCE, cis-1,2-DCE, 1,1-DCE and 1,1-DCA. TCE and cis-1,2-DCE are common intrinsic biodegradation intermediates for PCE; whereas 1,1-DCA is a common intrinsic biodegradation intermediate for 1,1,1-TCA. Although 1,1-DCE is a chlorinated ethene (like TCE), its presence in groundwater is most likely attributable to the abiotic transformation (elimination) of 1,1,1-TCA. Abiotic transformation of 1,1,1-TCA occurs naturally and rapidly in water, with half-lives ranging from six months to three years.

Similar to PCE and 1,1,1-TCA, higher concentrations of degradation products were observed in the samples collected from CPT-31 through CPT-33 as compared to those collected from CPT-34 through CPT-38 (Figures 7 through 10). To evaluate the more southerly migration of VOCs observed during this investigation as compared to the previous off-property investigation, ratios of parent to daughter products were evaluated for those samples collected along the transects 750 (CPT-19 through CPT-23) and 1,500 (CPT-31 through CPT-35) feet downgradient of the Site. In comparing the ratios of parent to daughter products in the samples collected along the two transects, higher ratios are observed along the transect 1,500 feet downgradient. These higher ratios of parent to daughter products observed in the transect further downgradient of the Site may suggest a local source in the area that is contributing to the contamination in groundwater.

Vertical distributions of selected VOCs along geologic cross-sections A-A' and B-B' are shown in Figures 14 through 19. Concentrations of VOCs generally exhibited a decreasing trend with increasing sample depth.

#### **4.3 Data Quality Review**

Geosyntec performed a QA/QC review of the data received from the laboratory. The data quality review included review of quality control samples collected in the field (trip blanks) along with laboratory quality control results. Data received from the analytical laboratory was reviewed for completeness, accuracy, precision, sample contamination, conformance with analytical method holding times, and to confirm that detection limits were within the methods allowable range. The results of the QA/QC review discussed below indicate that the data for the groundwater sampling are of acceptable quality.

The laboratory analytical report for the additional off-property investigation is included in Appendix D.

- **Completeness.** Completeness is expressed as the percentage of valid useable data obtained to the amount that was expected. Valid data were obtained from 100 percent of the groundwater samples collected.
- **Accuracy.** Accuracy is defined as the degree of agreement between a measured value and a true or known value, determined using spike samples. The samples were “spiked” with surrogate compounds and analyzed using EPA Method 8260B.
- **Precision.** Precision is the degree of agreement between duplicate analyses of the same parameter in a given sample. Precision is calculated as the relative percent difference (RPD) in duplicate analytical results as follows:

$$RPD = \frac{Result1 - Result2}{(Result1 + Result2)/2} \times 100$$

The duplicate matrix spike recoveries and the RPD of 1,1-DCA and PCE for sample CPT-37-70DMS were outside control criteria. Recovery in the laboratory control sample was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential high bias in this matrix. No further corrective action was appropriate.

- Sample Contamination. Blank samples, including trip and laboratory method blanks, were analyzed to check for potential sample contamination. No contamination was detected in the blank samples.
- Holding Times. The analytical reports were reviewed to identify whether the analytical method holding times were met. The holding times were met for the groundwater samples.
- Reporting Limits. Reporting limits for target analytes may sometimes be elevated due to sample size limitations (if an inadequate volume of sample is collected), or to dilutions necessary either to counter matrix interference or to bring target analyte concentrations to within the calibration range.

For the groundwater sampling, seven samples required a dilution due to the presence of elevated levels of target analytes (Appendix D). The reporting limits were adjusted to reflect the dilution.

## 5. CONCLUSIONS AND RECOMMENDATIONS

The field activities described in this report were conducted between 12 and 14 March 2007 at locations downgradient of the Site (Figure 2). The work included advancement of eight CPT soundings and collection of grab multi-level groundwater samples at each location. Based on the results of the field activities described above and historical Site data, the following conclusions are presented:

- The cross-sections presented as Figures 3 and 4 illustrate the stratigraphic units in the vicinity of the Site. The stratigraphic layering was observed to be generally consistent in all of the CPT soundings and similar to the layering observed during previous investigations (Geosyntec, 2005).
- During the investigation, depth to groundwater ranged from 50 to 55 feet bgs. No shallow (25 to 48 feet bgs) groundwater was encountered at any of the locations.
- VOC concentrations observed in CPT-31 through CPT-38, located approximately 1,500 feet downgradient of the Site, were significantly lower than those observed in CPT-22 through CPT-25, located approximately 750 feet downgradient of the Site. The lower concentrations observed with increasing distance from the Site are likely due to ongoing natural attenuation processes.
- In general, VOC concentrations detected approximately 1,500 feet downgradient of the Site were similar to the upgradient concentrations along Sorensen Avenue observed during the previous investigation, except for PCE in CPT 31, CPT-32 and CPT 33 and 1,1,1-TCA in CPT-31 (Figures 5 through 13).
- Although the horizontal hydraulic gradient measured on Site is to the west-southwest, the chemical results suggest that either the VOC migration direction may be more southerly than the hydraulic gradient or that other source properties may be contributing to the groundwater contamination detected in this area. Additionally, the higher concentrations of PCE and 1,1,1-TCA, as parent products, compared to the concentrations of daughter products, in samples collected 1,500 feet south of the Site may also indicate other potential sources in this area.
- Prior to evaluating the need for additional Off-Property investigations, Geosyntec recommends that an evaluation of the potential for additional source

properties be conducted in the vicinity of the recent transect. To evaluate the presence of other potential sources in this area, Geosyntec recommends conducting a records review for those properties south of the Site. The records review will include: 1) retaining Environmental Data Resources, Inc. (EDR) to conduct a search of federal, state, and county databases for available environmental records related to those properties south of the Site and 2) conducting file reviews at the City of Santa Fe Springs for those properties identified by EDR. The results of the record review would be summarized in a letter report for submittal to DTSC. Based on the results of the review, the need for additional investigation activities to the east and south of CPT-31 would be evaluated.

## **6. REFERENCES**

Blakely Environmental Investigations, Inc. (Blakely). Report of Findings for Angeles Chemical Company, 8915 Sorensen Avenue, Santa Fe Springs, California, 10 January 2001.

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## TABLES

**Table 1**  
**Laboratory Analytical Results - VOCs**  
**Former McKesson Facility**  
**Santa Fe Springs, California**  
**Page 1 of 2**

Sample ID	CPT-31	5	CPT-37	CPT-37	CPT-38	CPT-38
Sample Depth (ft bgs)	55		54	70	52	62
Sample Date	3/14/2007	17	3/13/2007	3/13/2007	3/13/2007	3/13/2007
<b>VOCs - EPA Method 8260</b>						
1,1,1,2-Tetrachloroethane	<3.7		<0.37	<0.37	<0.37	<0.37
1,1,1-Trichloroethane	95		<0.46	<0.46	<0.46	<0.46
1,1,2,2-Tetrachloroethane	<3.7		<0.37	<0.37	<0.37	<0.37
1,1,2-Trichloro-2,2,2-Trifluoroethane	<10		<1.0	1.1	<1.0	<1.0
1,1,2-Trichloroethane	<4.0		<0.40	<0.40	<0.40	<0.40
1,1-Dichloroethane	200		<0.35	6.0	0.48	<0.35
1,1-Dichloroethene	610		<0.45	6.1	6.7	0.90
1,1-Dichloropropene	<4.6		<0.46	<0.46	<0.46	<0.46
1,2,3-Trichlorobenzene	<3.9		<0.39	<0.39	<0.39	<0.39
1,2,3-Trichloropropane	<4.1		<0.41	<0.41	<0.41	<0.41
1,2,4-Trichlorobenzene	<4.5		<0.45	<0.45	<0.45	<0.45
1,2,4-Trimethylbenzene	<3.6		<0.36	<0.36	<0.36	<0.36
1,2-Dibromo-3-Chloropropane (DBCP)	<7.6		<0.76	<0.76	<0.76	<0.76
1,2-Dibromoethane (EDB)	<3.8		<0.38	<0.38	<0.38	<0.38
1,2-Dichlorobenzene	<3.6		<0.36	<0.36	<0.36	<0.36
1,2-Dichloroethane	16		<0.33	<0.33	<0.33	<0.33
1,2-Dichloropropane	<4.0		<0.40	<0.40	<0.40	<0.40
1,3,5-Trimethylbenzene	<4.0		<0.40	<0.40	<0.40	<0.40
1,3-Dichlorobenzene	<3.3		<0.33	<0.33	<0.33	<0.33
1,3-Dichloropropane	<4.1		<0.41	<0.41	<0.41	<0.41
1,4-Dichlorobenzene	<3.7		<0.37	<0.37	<0.37	<0.37
2,2-Dichloropropane	<3.8		<0.38	<0.38	<0.38	<0.38
2-Chlorotoluene	<4.0		<0.40	<0.40	<0.40	<0.40
2-Hexanone	<17		<1.7	<1.7	<1.7	<1.7
4-Chlorotoluene	<3.8		<0.38	<0.38	<0.38	<0.38
4-Methyl-2-Pentanone	<15		<1.5	<1.5	<1.5	<1.5
Acetone	<22		<2.2	<2.2	7.0	<2.2
Benzene	<4.2		<0.42	<0.42	<0.42	<0.42
Bromobenzene	<4.0		<0.40	<0.40	<0.40	<0.40
Bromochloromethane	<4.0		<0.40	<0.40	<0.40	<0.40
Bromodichloromethane	<4.0		0.52	0.41	<0.40	<0.40
Bromoform	<4.1		<0.41	<0.41	<0.41	<0.41
Bromomethane	<6.1		<0.61	<0.61	<0.61	<0.61
Carbon Disulfide	<8.3		<0.83	<0.83	<0.83	<0.83
Carbon Tetrachloride	<4.8		<0.48	<0.48	<0.48	<0.48
Chlorobenzene	<3.6		<0.36	<0.36	<0.36	<0.36
Chloroethane	<4.6		<0.46	<0.46	<0.46	<0.46
Chloroform	740		3.0	2.6	1.6	2.4
Chloromethane	<4.0		<0.40	<0.40	<0.40	<0.40
cis-1,2-Dichloroethene	200		<0.39	13	<0.39	0.39
cis-1,3-Dichloropropene	<3.4		<0.34	<0.34	<0.34	<0.34
Dibromochloromethane	<3.3		<0.33	<0.33	<0.33	<0.33

**Table 1**  
**Laboratory Analytical Results - VOCs**  
**Former McKesson Facility**  
**Santa Fe Springs, California**  
**Page 2 of 2**

Sample ID	CPT-31	6	CPT-37	CPT-37	CPT-38	CPT-38
Sample Depth (ft bgs)	55		54	70	52	62
Sample Date	3/14/2007	37	3/13/2007	3/13/2007	3/13/2007	3/13/2007
<b>VOCs - EPA Method 8260</b>						
Dibromomethane	<3.9		<0.39	<0.39	<0.39	<0.39
Dichlorodifluoromethane (Freon 12)	<4.8		<0.48	<0.48	<0.48	<0.48
Ethylbenzene	<4.1		<0.41	<0.41	<0.41	<0.41
Hexachlorobutadiene	<4.6		<0.46	<0.46	<0.46	<0.46
Isopropylbenzene (cumene)	<3.4		<0.34	<0.34	<0.34	<0.34
Methyl Ethyl Ketone (2-Butanone)	<17		<1.7	<1.7	<1.7	<1.7
Methylene Chloride	<4.3		<0.43	<0.43	<0.43	<0.43
Methyl-tert-butylether	<7.1		<0.71	<0.71	<0.71	<0.71
Naphthalene	<3.6		<0.36	<0.36	<0.36	<0.36
n-Butylbenzene	<3.7		<0.37	<0.37	<0.37	<0.37
n-Propylbenzene	<4.1		<0.41	<0.41	<0.41	<0.41
P-Cymene (P-Isopropyltoluene)	<3.4		<0.34	<0.34	<0.34	<0.34
sec-Butylbenzene	<3.7		<0.37	<0.37	<0.37	<0.37
Styrene	<3.7		<0.37	<0.37	<0.37	<0.37
tert-Butylbenzene	<4.1		<0.41	<0.41	<0.41	<0.41
Tetrachloroethene	600		<0.38	10	0.91	6.5
Toluene	<3.6		<0.36	<0.36	<0.36	<0.36
trans-1,2-Dichloroethene	<4.3		<0.43	0.50	<0.43	<0.43
trans-1,3-Dichloropropene	<3.9		<0.39	<0.39	<0.39	<0.39
Trichloroethene	150		<0.38	5.3	<0.38	1.4
Trichlorofluoromethane	6.4		<0.60	<0.60	<0.60	<0.60
Vinyl Acetate	<9.0		<0.90	<0.90	<0.90	<0.90
Vinyl Chloride	<4.3		<0.43	<0.43	<0.43	<0.43
Xylenes (total)	<11		<1.1	<1.1	<1.1	<1.1

## FIGURES

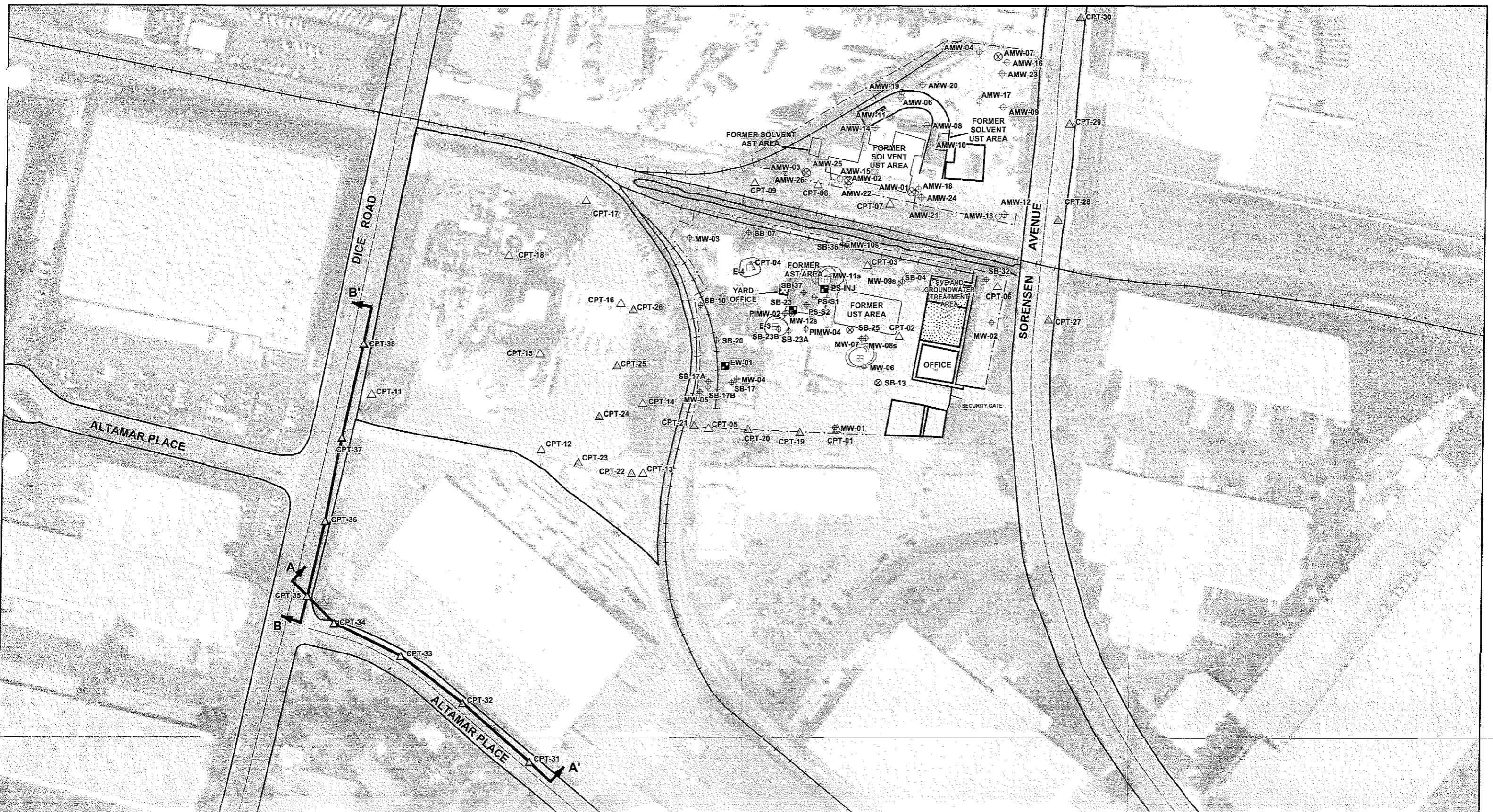


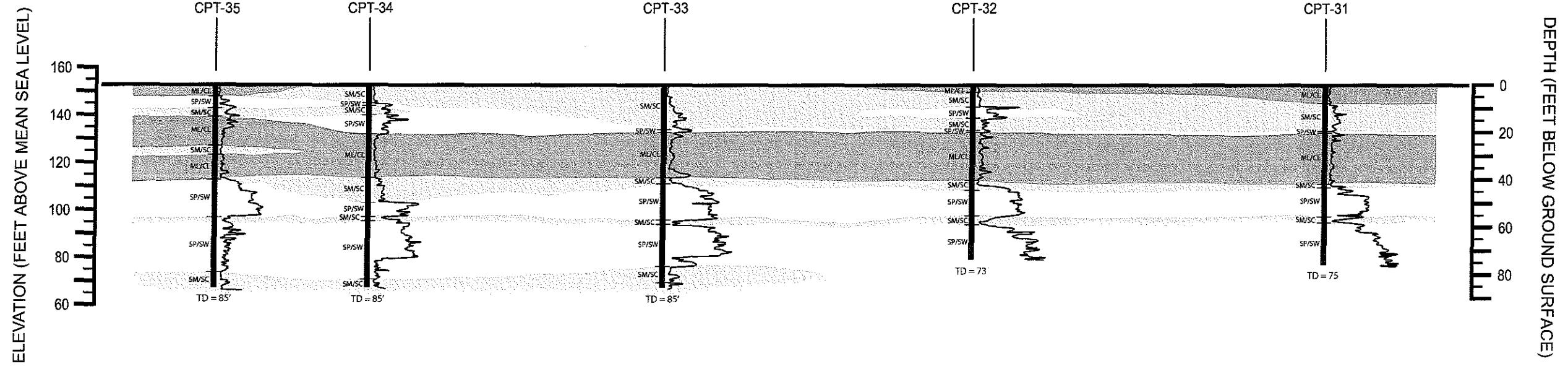
Figure 2

Cross-Section Location Map

Former McKesson Chemical Company Facility  
Santa Fe Springs, California

A  
NORTHWEST

A'  
SOUTHEAST

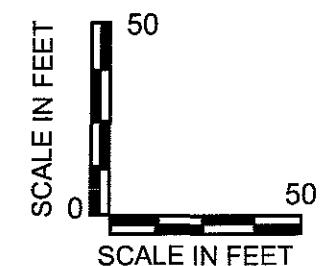


LEGEND

- [White Box] SP - SW (Sand)
- [Light Gray Box] SM - SC (Silty-Sand, Clayey-Sand)
- [Dark Gray Box] ML - CL (Silt, Clay)

Topography Assumed Nearly Flat,  
Ground Surface Assumed Approximately  
150 Feet Above Sea Level

- CPT-32 Cone Penetrometer Testing (CPT) Location
- Hand Augered
- Log Represents Cone Resistance qt (tsf); Actual CPT Logs Presented in Appendix C



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DOCUMENT NO.

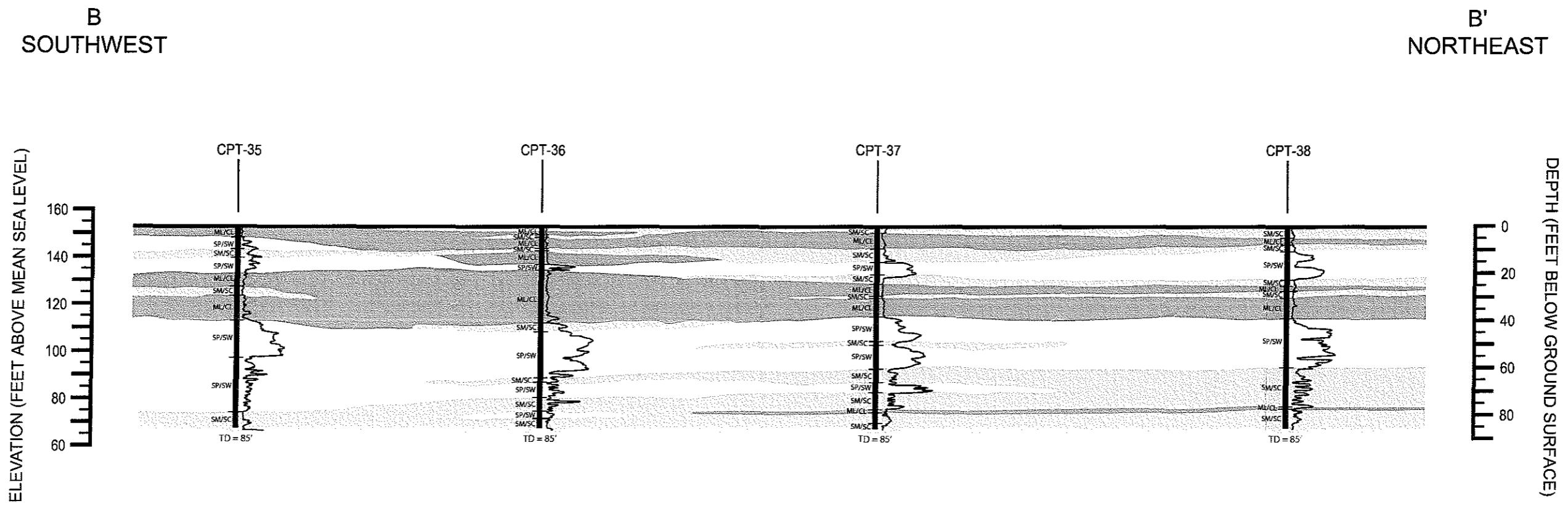
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DEPTH (FEET BELOW GROUND SURFACE)

FIGURE 3

GEOLOGIC CROSS-SECTION A-A'

FORMER MCKESSON CHEMICAL COMPANY FACILITY  
SANTA FE SPRINGS, CALIFORNIA

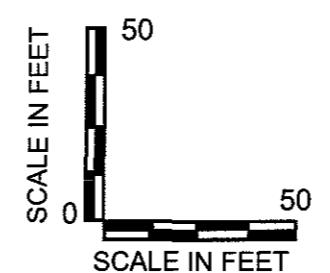


## **LEGEND**

- SP - SW (Sand)
- SM - SC (Silty-Sand, Clayey-Sand)
- ML - CL (Silt, Clay)

Topography Assumed Nearly Flat,  
Ground Surface Assumed Approximately  
150 Feet Above Sea Level

The diagram illustrates the CPT-35 cone penetrometer. It features a central vertical shaft with a probe at the top labeled "CPT-35". A horizontal bracket extends from the left side of the shaft, pointing to the label "Cone Penetrometer Testing (CPT) Location". Below the shaft, a series of concentric circles represent a soil log. Two horizontal lines extend from the left side of the log, pointing to the labels "Hand Augered" and "Log Represents Cone Resistance qt (tsf); CPT Logs Presented in Appendix C".



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FIGURE 4

## GEOLOGIC CROSS-SECTION B-B'

**FORMER MCKESSON CHEMICAL COMPANY FACILITY  
SANTA FE SPRINGS, CALIFORNIA**



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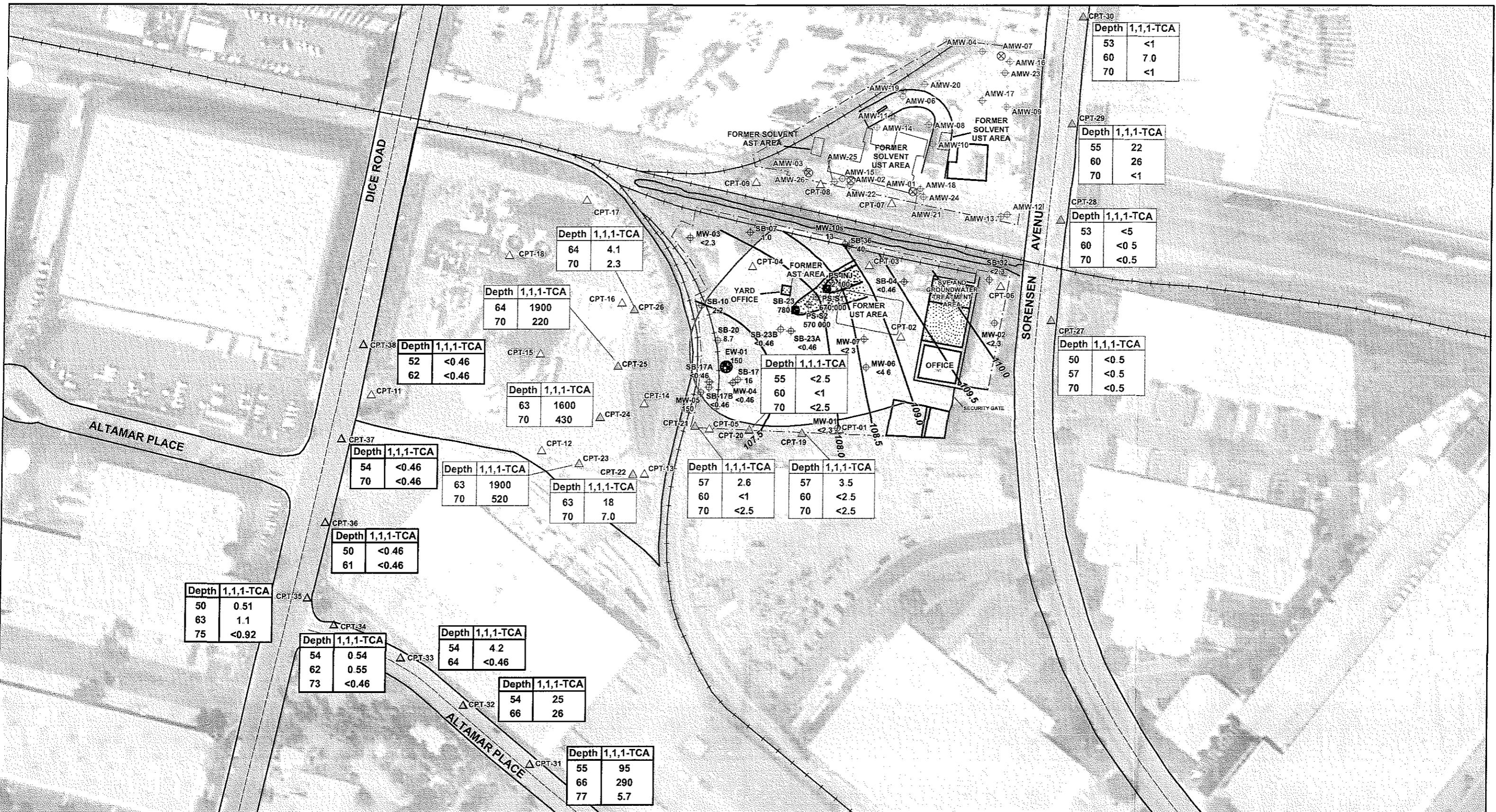
Document No.

September 2007

Figure 5

### PCE in Groundwater

Former McKesson Chemical Company Facility  
Santa Fe Springs, California



### Legend

- ▲ CPT (Geosyntec 2007)
- ▲ CPT (Geosyntec, 2004 & 2005)
- ▲ CPT (HLA 1991)
- ◆ Groundwater Monitoring Well
- Groundwater Extraction Well
- ⊗ Destroyed Well

Potentiometric Contour based on water level data from 19 March 2007 (0.5 foot interval)

10<sup>3.5</sup>

Concrete Surfacing

EW-1 Hydraulic Capture Zone

Building

SB-23 Hydraulic Capture Zone

Cyclone Fence

PS-INJ Hydraulic Capture Zone

Railroad Track

NOTES:  
 - 1,1,1-TCA = 1,1,1-Trichloroethane  
 - Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ )  
 - Depth = Feet Below Ground Surface  
 - NA = Not analyzed  
 - Groundwater samples for monitoring wells and extraction wells collected in March 2007

- The capture zones are based on an effective flow rate from the first quarter 2007 (i.e. total gallons extracted divided by the total number of days in quarter). As a result, the flow rate for EW-1 was 26 gpm, the flow rate for SB-23 was 3 gpm, and the flow rate for PS-INJ was 3 gpm.  
 - Base map adapted from site plans prepared by Geomatix (2001)

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Figure 6

1,1,1-TCA in Groundwater  
 Former McKesson Chemical Company Facility  
 Santa Fe Springs, California



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August 2007

Figure 7

### TCE in Groundwater

Former McKesson Chemical Company Facility  
Santa Fe Springs, California



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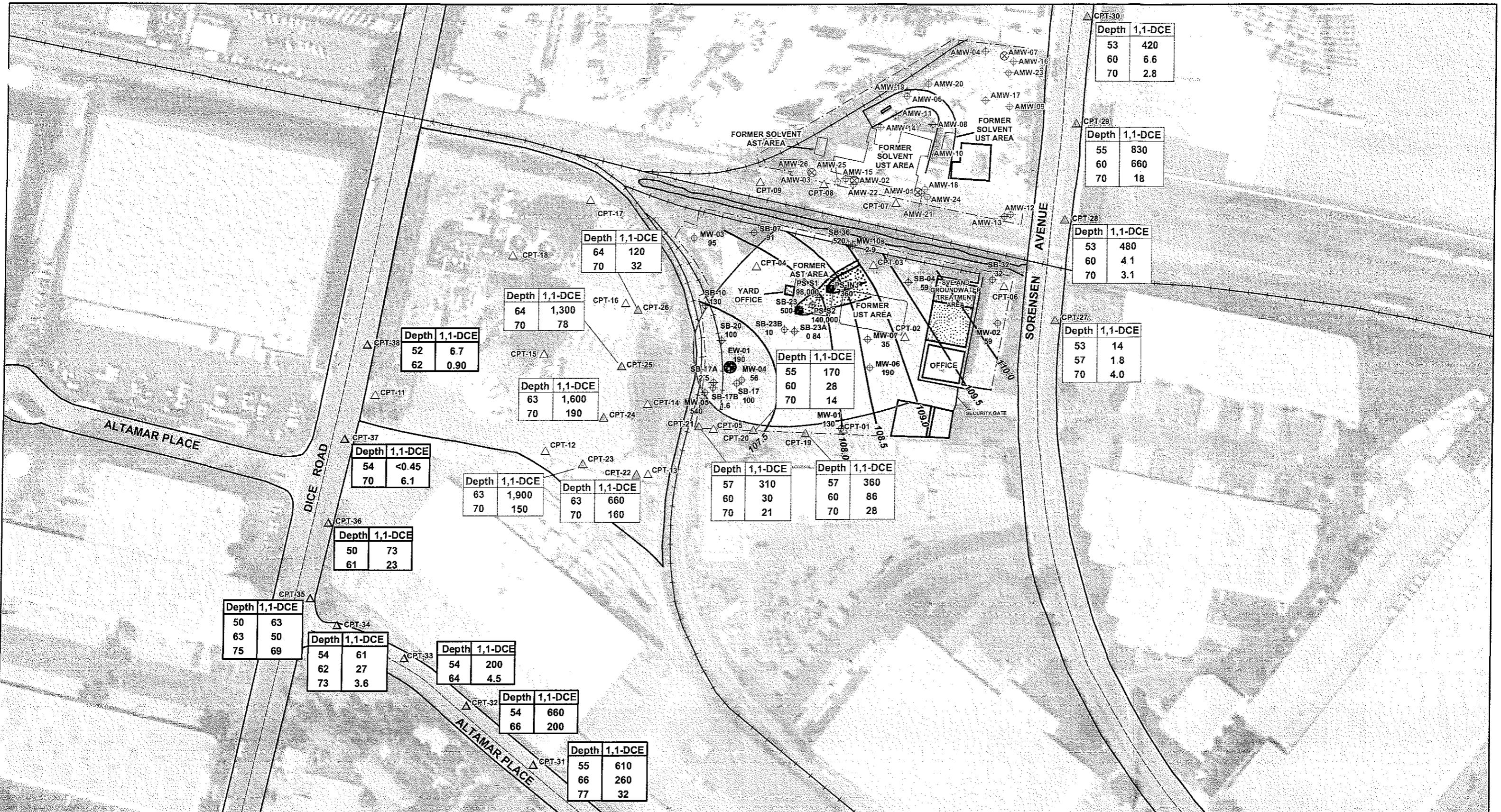
Document No.

September 2007

Figure 8

### 1,1-DCA in Groundwater

Former McKesson Chemical Company Facility  
Santa Fe Springs, California



P:\GIS\mckesson\project\2007\July\11DCE\_CPT.mxd  
16 October 2007

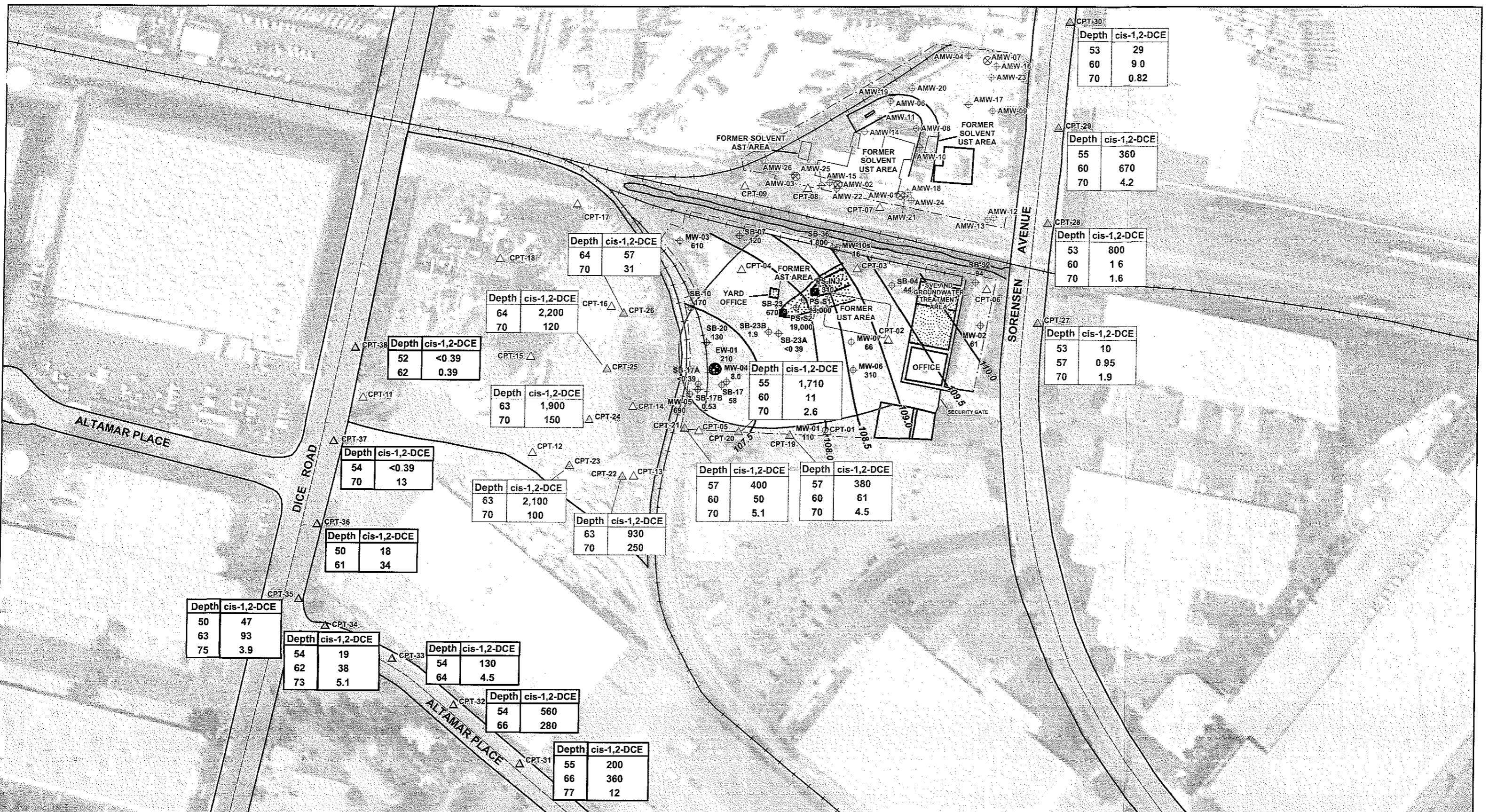
**NOTES:**  
 - 1,1-DCE = 1,1-Dichloroethene  
 - Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ )  
 - Depth = Feet Below Ground Surface  
 - NA = Not analyzed  
 - Groundwater samples for monitoring wells and extraction wells collected in March 2007  
 - The capture zones are based on an effective flow rate from the first quarter 2007 (i.e., total gallons extracted divided by the total number of days in quarter). As a result, the flow rate for EW-1 was 26 gpm, the flow rate for SB-23 was 3 gpm, and the flow rate for PS-INJ was 3 gpm.  
 - Base map adapted from site plans prepared by Geomatrix (2001)

0 75 150 Feet

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Document No.  
September 2007

Figure 9

1,1-DCE in Groundwater  
Former McKesson Chemical Company Facility  
Santa Fe Springs, California



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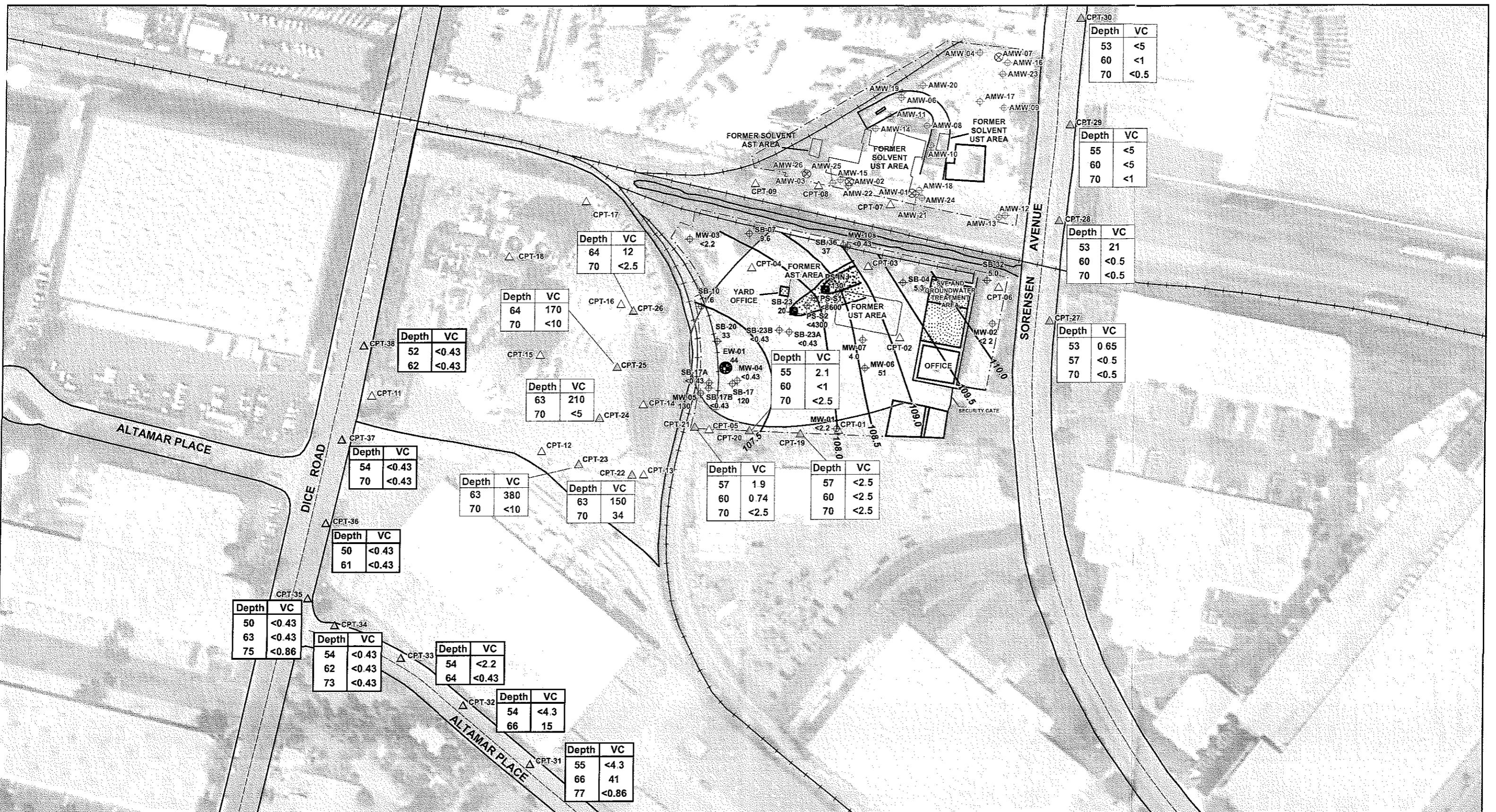
Project No. HA0620-13

Document No.

September 2007

Figure 10

**cis-1,2-DCE in Groundwater**  
Former McKesson Chemical Company Facility  
Santa Fe Springs, California



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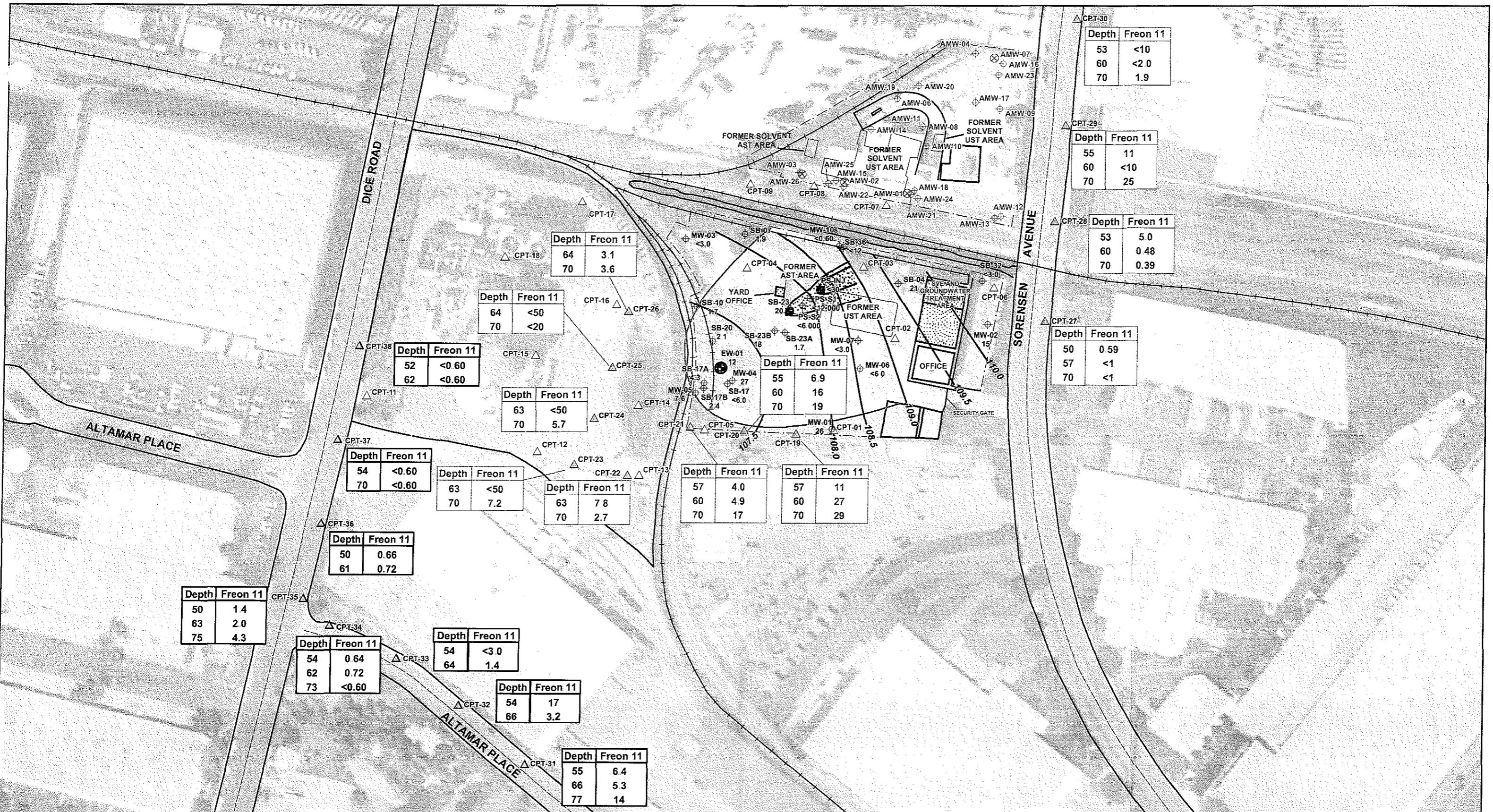
Project No. HA0620-13

Document No.

September 2007

Figure 11

Vinyl Chloride in Groundwater  
Former McKesson Chemical Company Facility  
Santa Fe Springs, California


**Legend**

- ▲ CPT (Geosyntec 2007)
- △ CPT (Geosyntec 2004 & 2005)
- △ CPT (HLA 1991)
- ⊕ Groundwater Monitoring Well
- Groundwater Extraction Well
- ⊗ Destroyed Well

108.5  
Potentiometric Contour based  
on water level data from 19  
March 2007 (0.5 foot interval)

- Concrete Surfacing
- EW-1 Hydraulic Capture Zone
- Building
- SB-23 Hydraulic Capture Zone
- PS-INJ Hydraulic Capture Zone
- Cyclone Fence
- Railroad Track

**NOTES:**

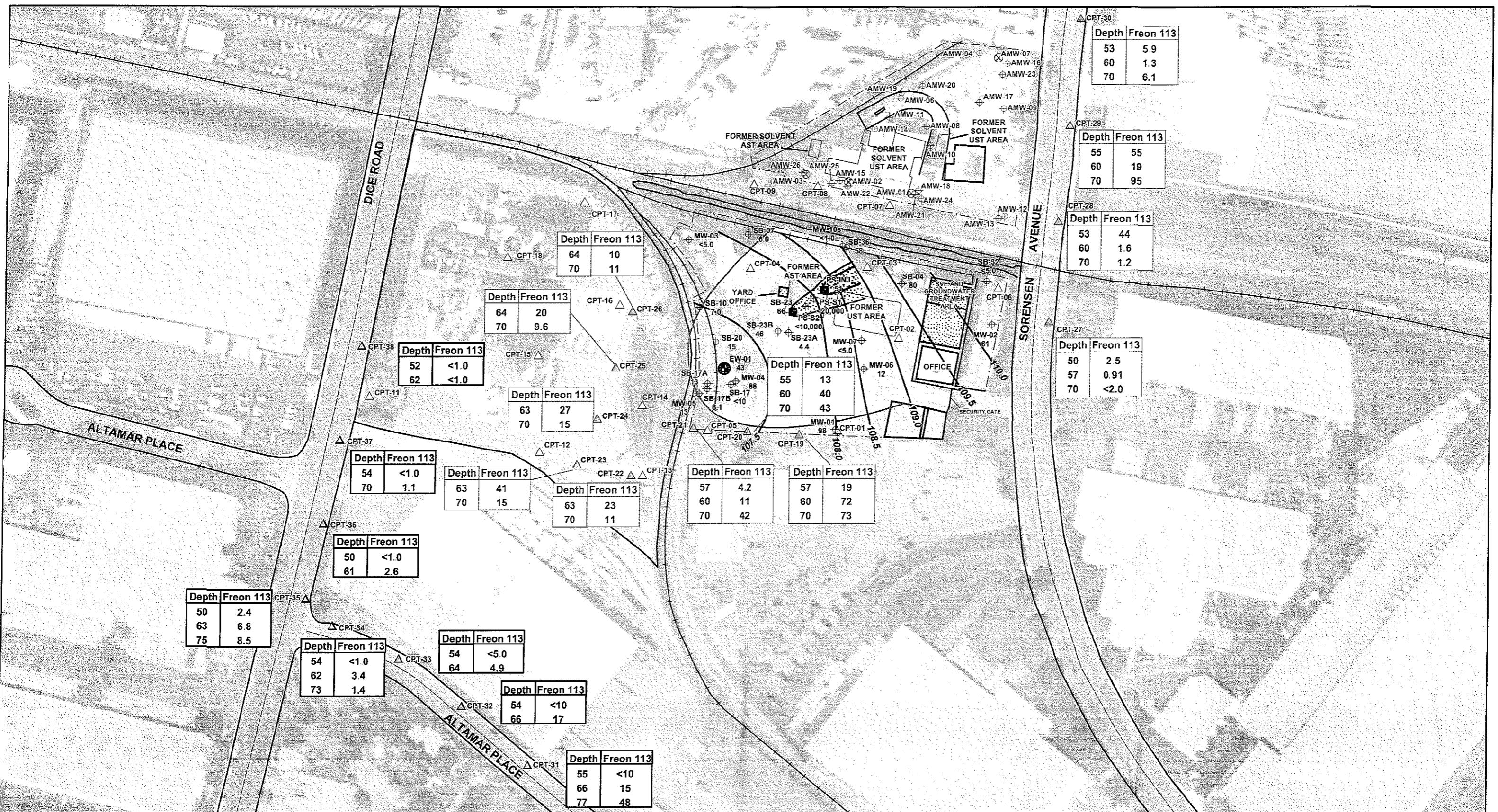
- Freon 11 = Trichlorofluoromethane
- Concentrations reported in micrograms per liter ( $\mu\text{g/L}$ )
- Depth = Feet Below Ground Surface
- NA = Not Analyzed
- Groundwater samples for monitoring wells and extraction wells collected in March 2007
- The capture zones are based on an effective flow rate from the first quarter 2007 (i.e., total gallons extracted divided by the total number of days in quarter). As a result, the flow rate for EW-1 was 26 gpm, the flow rate for SB-23 was 3 gpm, and the flow rate for PS-INJ was 3 gpm.
- Base map adapted from site plans prepared by Geomatix (2001)

0 75 150 Feet

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September 2007

**Figure 12**

**Freon 11 in Groundwater**  
Former McKesson Chemical Company Facility  
Santa Fe Springs, California



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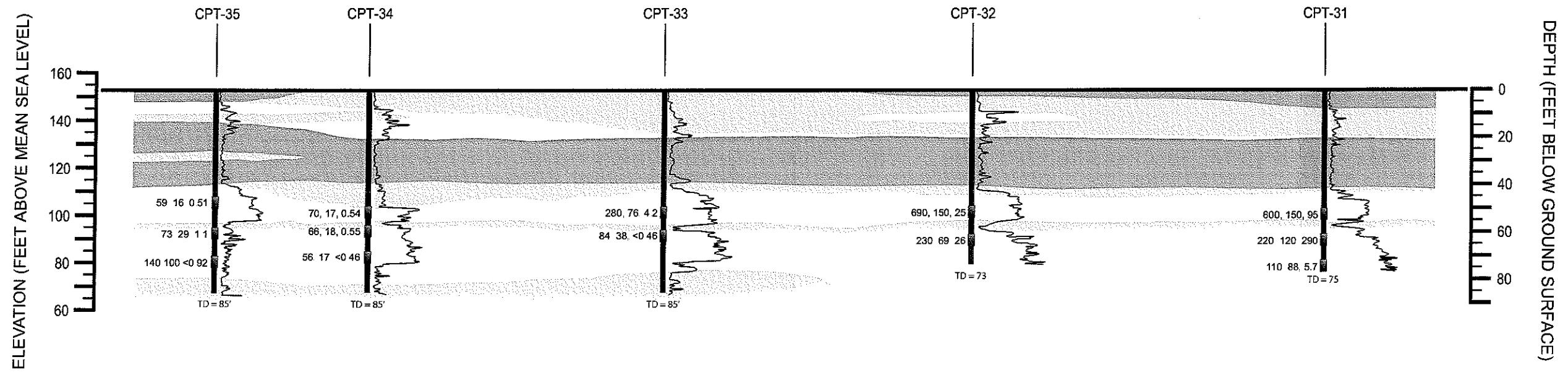
Figure 13

### Freon 113 in Groundwater

Former McKesson Chemical Company Facility  
Santa Fe Springs, California

A  
NORTHWEST

A'  
SOUTHEAST

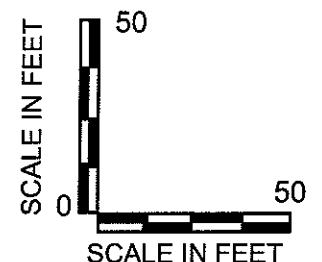


LEGEND

SP - SW (Sand)
SM - SC (Silty-Sand, Clayey-Sand)
ML - CL (Silt, Clay)

Topography Assumed Nearly Flat,  
Ground Surface Assumed Approximately  
150 Feet Above Sea Level

CPT-35 Cone Penetrometer Testing (CPT) Location  
Hand Augered  
Log Represents Cone Resistance qt (tsf); CPT Logs Presented in Appendix C  
Groundwater Sample Interval, March 2007  
1,1,1-TCA - 1,1,1-Trichloroethane (ug/L)  
TCE - Trichloroethene (ug/L)  
PCE - Tetrachloroethene (ug/L)



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DATE: SEPTEMBER 2007

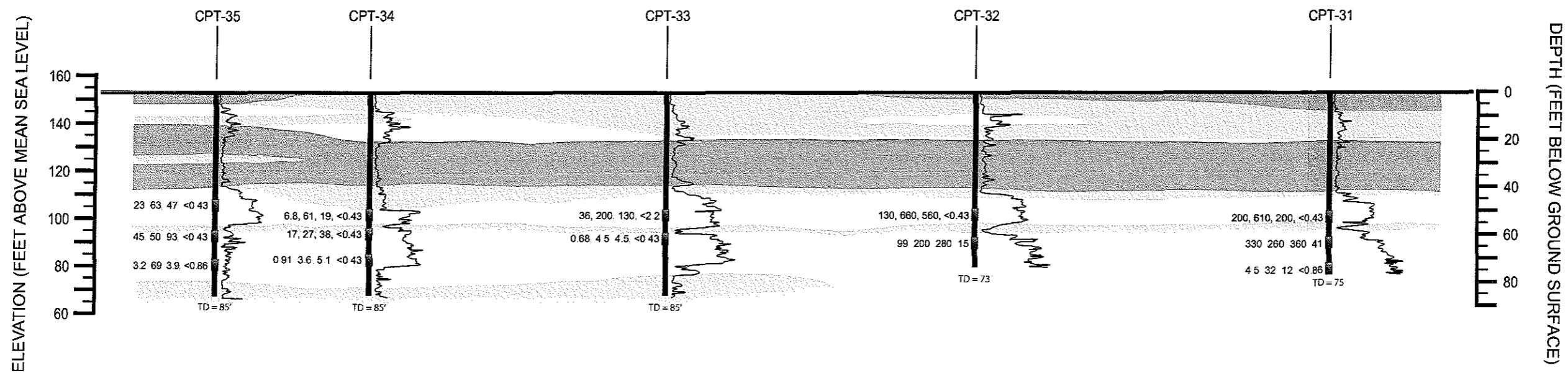
FIGURE 14

PCE, TCE, AND 1,1,1-TCA IN GROUNDWATER  
ALONG GEOLOGIC CROSS-SECTION A-A'

FORMER MCKESSON CHEMICAL COMPANY FACILITY  
SANTA FE SPRINGS, CALIFORNIA

A  
NORTHWEST

A'  
SOUTHEAST

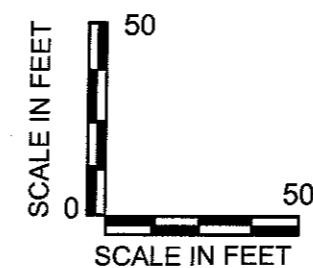


#### LEGEND

- [White Box] SP - SW (Sand)
- [Light Gray Box] SM - SC (Silty-Sand, Clayey-Sand)
- [Dark Gray Box] ML - CL (Silt, Clay)

Topography Assumed Nearly Flat,  
Ground Surface Assumed Approximately  
150 Feet Above Sea Level

- CPT-35      Cone Penetrometer Testing (CPT) Location
- Hand Augered
- Log Represents Cone Resistance qt (tsf); CPT Logs Presented in Appendix C
- Groundwater Sample Interval, March 2007
- Vinyl Chloride (ug/L)
- cis-1,2-DCE - cis-1,2-Dichloroethene (ug/L)
- 1,1-DCE - 1,1-Dichloroethene (ug/L)
- 1,1-DCA - 1,1-Dichloroethane (ug/L)



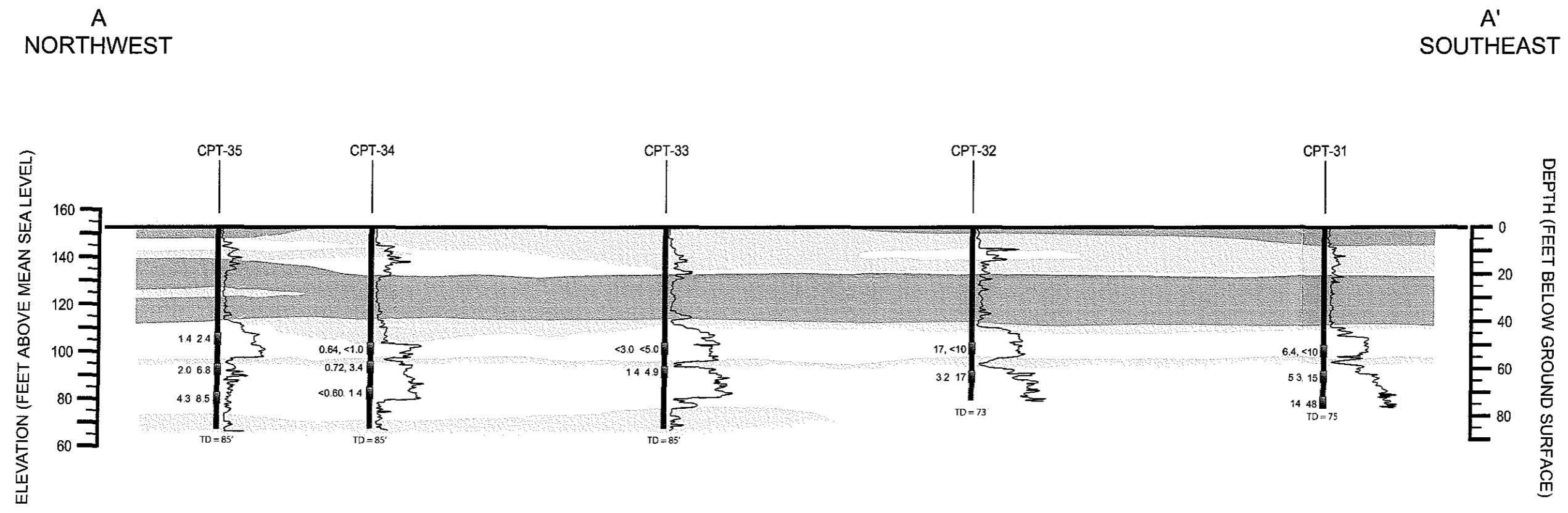
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DOCUMENT NO.  
DATE: SEPTEMBER 2007

FIGURE 15

1,1-DCA, 1,1-DCE, AND cis-1,2-DCE AND VINYL CHLORIDE IN GROUNDWATER ALONG GEOLOGIC CROSS-SECTION A-A'

FORMER MCKESSON CHEMICAL COMPANY FACILITY  
SANTA FE SPRINGS, CALIFORNIA



## LEGEND

-  SP - SW (Sand)
-  SM - SC (Silty-Sand, Clayey-Sand)
-  ML - CL (Silt, Clay)

Topography Assumed Nearly Flat,  
Ground Surface Assumed Approximately  
150 Feet Above Sea Level

CPT-35 Cone Penetrometer Testing (CPT) Location

Hand Augered

Log Represents Cone Resistance  
qt (tsf); CPT Logs Presented  
in Appendix C

Groundwater Sample Interval, March 2007

1.4 2.4

Freon 113 ( $\mu\text{g/L}$ )

Freon 11 ( $\mu\text{g/L}$ )

A scale bar labeled "SCALE IN FEET" with markings at 0, 50, and 100 feet.

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DOCUMENT NO.	
DATE:	SEPTEMBER 2007

FIGURE 16

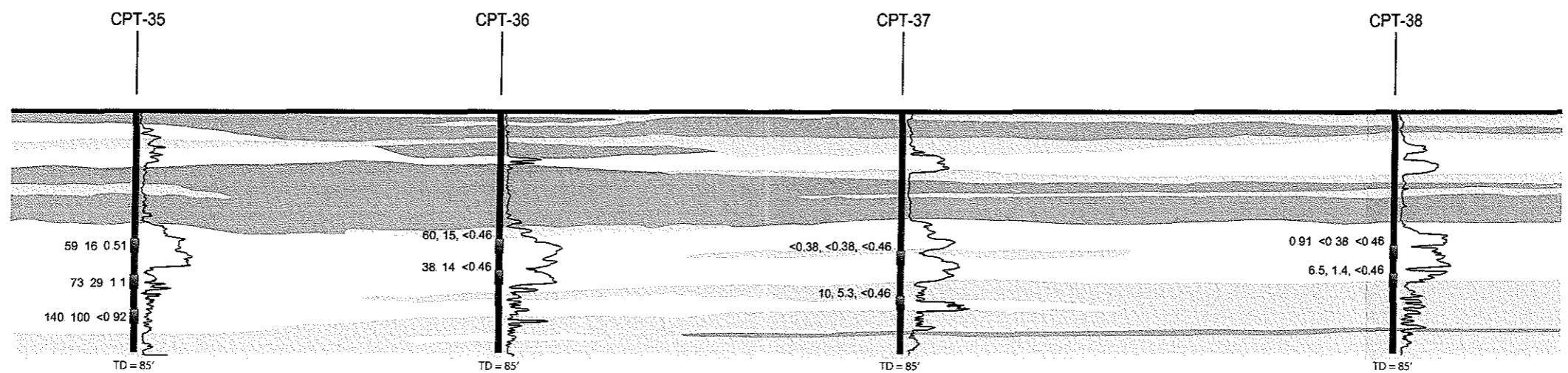
## FREON 11 AND FREON 113 IN GROUNDWATER ALONG GEOLOGIC CROSS-SECTION A-A'

FORMER MCKESSON CHEMICAL COMPANY FACILITY  
SANTA FE SPRINGS, CALIFORNIA

B  
SOUTHWEST

B'  
NORTHEAST

ELEVATION (FEET ABOVE MEAN SEA LEVEL)



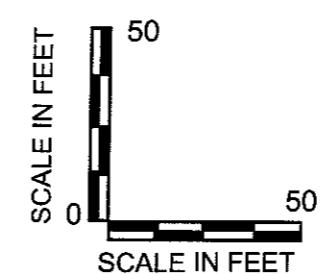
DEPTH (FEET BELOW GROUND SURFACE)

LEGEND

- SP - SW (Sand)
- SM - SC (Silty-Sand, Clayey-Sand)
- ML - CL (Silt, Clay)

Topography Assumed Nearly Flat,  
Ground Surface Assumed Approximately  
150 Feet Above Sea Level

CPT-35 Cone Penetrometer Testing (CPT) Location  
Hand Augered Log Represents Cone Resistance qt (tsf); CPT Logs Presented in Appendix C  
Groundwater Sample Interval, March 2007  
1,1,1-TCA - 1,1,1-Trichloroethane (ug/L)  
TCE - Trichloroethene (ug/L)  
PCE - Tetrachloroethene (ug/L)



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consultants

PROJECT NO. HA0620-13  
DOCUMENT NO.  
DATE: SEPTEMBER 2007

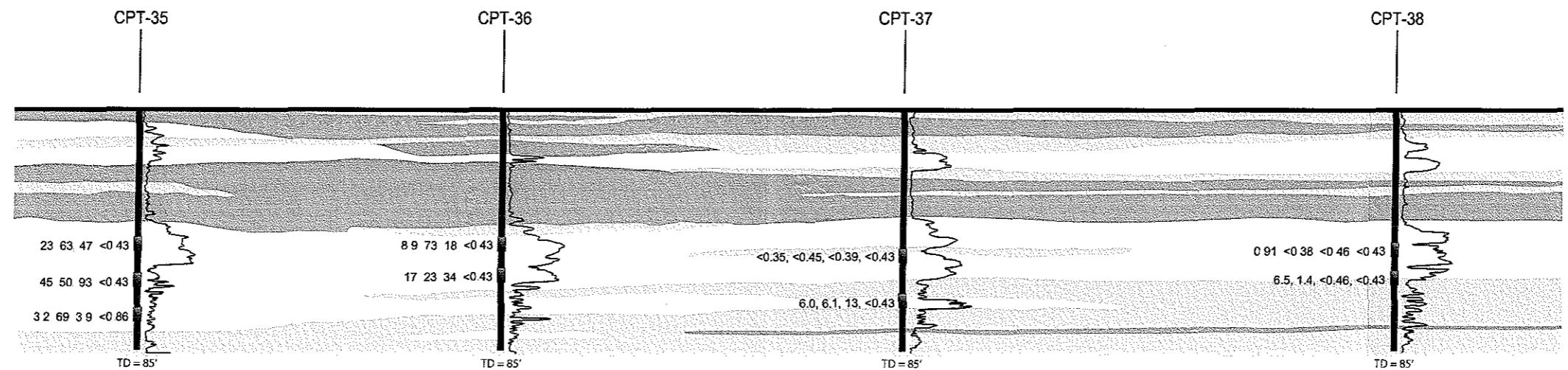
FIGURE 17

PCE, TCE, AND 1,1,1-TCA IN GROUNDWATER  
ALONG GEOLOGIC CROSS-SECTION B-B'  
FORMER MCKESSON CHEMICAL COMPANY FACILITY  
SANTA FE SPRINGS, CALIFORNIA

B  
SOUTHWEST

B'  
NORTHEAST

ELEVATION (FEET ABOVE MEAN SEA LEVEL)



DEPTH (FEET BELOW GROUND SURFACE)

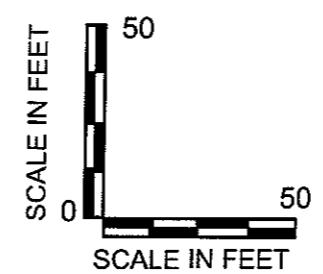
LEGEND

- [White Box] SP - SW (Sand)
- [Light Gray Box] SM - SC (Silty-Sand, Clayey-Sand)
- [Dark Gray Box] ML - CL (Silt, Clay)

Topography Assumed Nearly Flat,  
Ground Surface Assumed Approximately  
150 Feet Above Sea Level

CPT-35 Cone Penetrometer Testing (CPT) Location

- Hand Augered
- Log Represents Cone Resistance qt (tsf); CPT Logs Presented in Appendix C
- Groundwater Sample Interval, March 2007
- Vinyl Chloride (ug/L)
- cis-1,2-DCE - cis-1,2-Dichloroethene (ug/L)
- 1,1-DCE - 1,1-Dichloroethene (ug/L)
- 1,1-DCA - 1,1-Dichloroethane (ug/L)



Geosyntec  
consultants

PROJECT NO. HA0620-13

DOCUMENT NO.

DATE: SEPTEMBER 2007

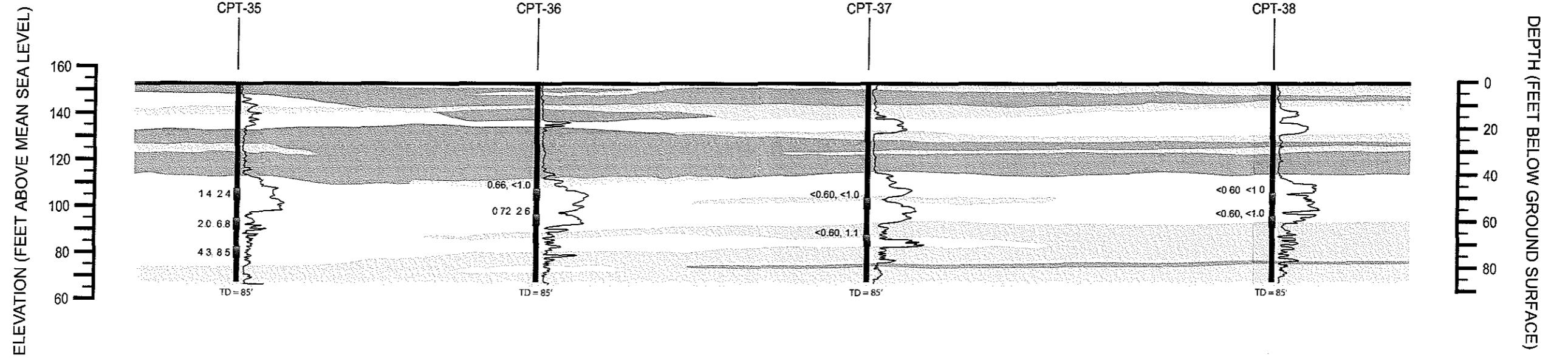
FIGURE 18

1,1-DCA, 1,1-DCE, AND cis-1,2-DCE AND VINYL CHLORIDE IN GROUNDWATER ALONG GEOLOGIC CROSS-SECTION B-B'

FORMER MCKESSON CHEMICAL COMPANY FACILITY  
SANTA FE SPRINGS, CALIFORNIA

B  
SOUTHWEST

B'  
NORTHEAST

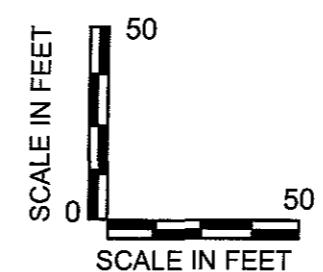


LEGEND

- [Light Gray Box] SP - SW (Sand)
- [Medium Gray Box] SM - SC (Silty-Sand, Clayey-Sand)
- [Dark Gray Box] ML - CL (Silt, Clay)

Topography Assumed Nearly Flat,  
Ground Surface Assumed Approximately  
150 Feet Above Sea Level

CPT-35 Cone Penetrometer Testing (CPT) Location  
Hand Augered  
Log Represents Cone Resistance qt (tsf); CPT Logs Presented in Appendix C  
Groundwater Sample Interval, March 2007  
Freon 113 (ug/L)  
Freon 11 (ug/L)



Geosyntec  
consultants

PROJECT NO. HA0620-13  
DOCUMENT NO.  
DATE: SEPTEMBER 2007

FIGURE 19

FREON 11 AND FREON 113 IN GROUNDWATER  
ALONG GEOLOGIC CROSS-SECTION B-B'  
FORMER MCKESSON CHEMICAL COMPANY FACILITY  
SANTA FE SPRINGS, CALIFORNIA

# APPENDIX A

## Historical Analytical Data

**Table A-1**  
**Historical Analytical Results - VOCs**  
**Former McKesson Facility**  
**Santa Fe Springs, California**  
**Page 1 of 4**

Sample ID	CPT-01	CPT-02	1	CPT-18	CPT-19	CPT-19	CPT-19
Sample Depth (ft bgs)	50	50		50	57	60	70
Sample Date	4/9/1991	4/9/1991	91	10/29/1991	12/14/2004	12/14/2004	12/16/2004
<b>VOCs - EPA Method 8260</b>							
1,1,1-Trichloroethane	48	<b>610</b>		<1	3.5	<2.5	<2.5
1,1,2-Trichloro-2,2,2-Trifluoroethane		35		50	19	72	73
1,1,2-Trichloroethane	<4	<5		1	<2.5	<2.5	<2.5
1,1-Dichloroethane	64	<b>88</b>		4	400	63	1.8
1,1-Dichloroethene	220	<b>330</b>		32	360	86	28
1,2-Dichloroethane	<4	<5		<1	12	2.2	<2.5
4-Methyl-2-Pentanone	<40	<50		<10	<50	<50	<50
Acetone	<80	<100		<20	<50	<50	<50
Aliphatic Hydrocarbon				<b>400</b>			
Benzene	<4	<5		<1	<2.5	<2.5	<2.5
Bromodichloromethane	<4	<5		<1	<5	<5	<5
Bromoform	<20	<25		<5	<5	<5	<5
Chlorobenzene	<4	<5		<1	<2.5	<2.5	<2.5
Chloroform	<4	<5		<1	<b>2.7</b>	4.2	<b>4.3</b>
cis-1,2-Dichloroethene	<b>160</b>	<b>44</b>		3	380	61	4.5
Cyclic Hydrocarbon				<b>100</b>			
Cyclohexene							
Dibromochloromethane	<4	<5		<1	<5	<5	<5
Dichlorodifluoromethane (Freon 12)					<5	<5	<5
Dichlorofluoromethane							
Ethylbenzene	<4	<5		<1	<2.5	<2.5	<2.5
ethylmethylbenzene isomer							
Isopropylbenzene (cumene)					<5	<5	<5
Methyl Cyhexene							
Methyl Ethyl Ketone (2-Butanone)	<80	<100		<20	<50	<50	<50
Methylene Chloride	<20	<b>450</b>		<5	<10	<10	<10
Naphthalene					<5	<5	<5
Tetrachloroethene	<b>150</b>	<b>330</b>		<b>170</b>	<b>250</b>	93	67
Toluene	<8	<b>18</b>		<2	<2.5	<2.5	<2.5
trans-1,2-Dichloroethene	<b>8</b>	<5		<1	<b>1.8</b>	<2.5	<2.5
Trichloroethene	<b>280</b>	<b>220</b>		<b>88</b>	<b>190</b>	<b>170</b>	<b>150</b>
Trichlorofluoromethane					11	27	29
trimethylbenzene isomer							
Vinyl Chloride	<4	<5		<1	<2.5	<2.5	<2.5
Xylenes (total)	<4	<b>14</b>		<1	<7.5	<7.5	<7.5

**Table A-1**  
**Historical Analytical Results - VOCs**  
**Former McKesson Facility**  
**Santa Fe Springs, California**  
**Page 2 of 4**

Sample ID	CPT-20	CPT-20	C	CPT-26	CPT-26	CPT-27	CPT-27	CPT-27
Sample Depth (ft bgs)	55	60		64	57	50	57	70
Sample Date	12/14/2004	12/14/2004	12/	2/2/2005	2/2/2005	12/22/2004	12/22/2004	12/22/2004
<b>VOCs - EPA Method 8260</b>								
1,1,1-Trichloroethane	<2.5	<1		4.1	2.3	<0.5	<0.5	<0.5
1,1,2-Trichloro-2,2,2-Trifluoroethane	13	40		10	11	2.5	0.91	<2
1,1,2-Trichloroethane	<2.5	<1		<1	<2.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	200	16		100	29	5.6	0.64	0.19
1,1-Dichloroethene	170	28		120	32	14	1.8	4.0
1,2-Dichloroethane	8.2	<1		0.78	3.1	<0.5	<0.5	<0.5
4-Methyl-2-Pentanone	<50	<20		<20	<50	<10	<10	<10
Acetone	<50	<20		<20	<50	5.0	2.6	<10
Aliphatic Hydrocarbon								
Benzene	<2.5	<1		1.5	<2.5	0.37	<0.5	<0.5
Bromodichloromethane	<5	<2		<2	<5	<1	<1	<1
Bromoform	<5	<2		<2	<5	<1	<1	<1
Chlorobenzene	<2.5	<1		0.40	<2.5	<0.5	<0.5	<0.5
Chloroform	1.6	2.7		1.0	<2.5	0.61	1.3	0.87
cis-1,2-Dichloroethene	170	11		57	31	10	0.95	1.9
Cyclic Hydrocarbon								
Cyclohexene								
Dibromochloromethane	<5	<2		<2	<5	<1	<1	<1
Dichlorodifluoromethane (Freon 12)	<5	<2		<2	<5	<1	<1	<1
Dichlorofluoromethane								
Ethylbenzene	<2.5	<1		<1	<2.5	<0.5	<0.5	<0.5
ethylmethylbenzene isomer								
Isopropylbenzene (cumene)	<5	<2		<2	<5	<1	<1	<1
Methyl Cyhexene								
Methyl Ethyl Ketone (2-Butanone)	<50	<20		<20	<50	<10	<10	<10
Methylene Chloride	<10	<4		<4	2.9	<2	<2	<2
Naphthalene	<5	<2		<2	<5	<1	<1	<1
Tetrachloroethene	130	66		96	200	45	16	86
Toluene	<2.5	<1		<1	<2.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	2.6	<1		1.8	1.7	0.33	<0.5	<0.5
Trichloroethene	110	99		51	58	15	10	14
Trichlorofluoromethane	6.9	16		3.1	3.6	0.59	<1	<1
trimethylbenzene isomer								
Vinyl Chloride	2.1	<1		12	<2.5	0.65	<0.5	<0.5
Xylenes (total)	<7.5	<3		<3	<7.5	<1.5	<1.5	<1.5

**Table A-1**  
**Historical Analytical Results - VOCs**  
**Former McKesson Facility**  
**Santa Fe Springs, California**  
**Page 3 of 4**

Sample ID	CPT-28	CPT-28	CPT-CPT-33	CPT-34	CPT-34	CPT-34
Sample Depth (ft bgs)	53	60	70 64	54	62	73
Sample Date	12/22/2004	12/22/2004	12/22/3/14/2007	3/13/2007	3/13/2007	3/13/2007
<b>VOCs - EPA Method 8260</b>						
1,1,1-Trichloroethane	<5	<0.5	<0. <0.46	<b>0.54</b>	<b>0.55</b>	<0.46
1,1,2-Trichloro-2,2,2-Trifluoroethane	44	<b>1.6</b>	<b>1.2 4.9</b>	<1.0	3.4	<b>1.4</b>
1,1,2-Trichloroethane	<5	<0.5	<0. <0.40	<0.40	<0.40	<0.40
1,1-Dichloroethane	<b>160</b>	<b>0.30</b>	<b>0.2 0.68</b>	<b>6.8</b>	<b>17</b>	<b>0.91</b>
1,1-Dichloroethene	<b>480</b>	<b>4.1</b>	<b>3.1 4.5</b>	<b>61</b>	<b>27</b>	<b>3.6</b>
1,2-Dichloroethane	<5	<0.5	<0. <0.33	<0.33	<0.33	<0.33
4-Methyl-2-Pentanone	<100	<10	<1<1.5	<1.5	<1.5	<1.5
Acetone	<100	<10	<1<2.2	<2.2	<b>4.1</b>	<b>18</b>
<b>Aliphatic Hydrocarbon</b>						
Benzene	<b>16</b>	<0.5	<0. <0.42	<0.42	<0.42	<0.42
Bromodichloromethane	<10	<1	<1 <0.40	<0.40	<0.40	<0.40
Bromoform	<10	<1	<1 <0.41	<0.41	<0.41	<0.41
Chlorobenzene	<5	<0.5	<0. <0.36	<0.36	<0.36	<0.36
Chloroform	<5	<b>1.5</b>	<b>1.3 0.56</b>	<0.40	<0.40	<b>0.61</b>
cis-1,2-Dichloroethene	<b>800</b>	<b>1.6</b>	<b>1.6 4.5</b>	<b>19</b>	<b>38</b>	<b>5.1</b>
<b>Cyclic Hydrocarbon</b>						
Cyclohexene						
Dibromochloromethane	<10	<1	<1 <0.33	<0.33	<0.33	<0.33
Dichlorodifluoromethane (Freon 12)	<10	<1	<1 <0.48	<0.48	<0.48	<0.48
Dichlorofluoromethane						
Ethylbenzene	<5	<0.5	<0. <0.41	<0.41	<0.41	<0.41
ethylmethylbenzene isomer						
Isopropylbenzene (cumene)	<b>2.7</b>	<1	<1 <0.34	<0.34	<0.34	<0.34
Methyl Cyhexene						
Methyl Ethyl Ketone (2-Butanone)	<100	<10	<1<1.7	<1.7	<1.7	<b>3.6</b>
Methylene Chloride	<20	<2	<2 <0.43	<0.43	<0.43	<0.43
Naphthalene	<10	<1	<1 <0.36	<0.36	<0.36	<b>0.42</b>
Tetrachloroethene	<b>120</b>	<b>38</b>	<b>63 84</b>	<b>70</b>	<b>66</b>	<b>56</b>
Toluene	<5	<0.5	<0. <0.36	<0.36	<0.36	<0.36
trans-1,2-Dichloroethene	<b>3.4</b>	<0.5	<0. <0.43	<0.43	<0.43	<0.43
Trichloroethene	<b>150</b>	<b>16</b>	<b>16 38</b>	<b>17</b>	<b>18</b>	<b>17</b>
Trichlorofluoromethane	<b>5.0</b>	<b>0.48</b>	<b>0.3! 1.4</b>	<b>0.64</b>	<b>0.72</b>	<0.60
trimethylbenzene isomer						
Vinyl Chloride	<b>21</b>	<0.5	<0. <0.43	<0.43	<0.43	<0.43
Xylenes (total)	<15	<1.5	<1. <1.1	<1.1	<1.1	<1.1

**Table A-1**  
**Historical Analytical Results - VOCs**  
**Former McKesson Facility**  
**Santa Fe Springs, California**  
**Page 4 of 4**

Sample ID	CPT-35	CPT-35
Sample Depth (ft bgs)	50	63
Sample Date	3/12/2007	3/12/2007
<b>VOCs - EPA Method 8260</b>		
1,1,1-Trichloroethane	<b>0.51</b>	<b>1.1</b>
1,1,2-Trichloro-2,2,2-Trifluoroethane	<b>2.4</b>	<b>6.8</b>
1,1,2-Trichloroethane	<0.40	<0.40
1,1-Dichloroethane	<b>23</b>	<b>45</b>
1,1-Dichloroethene	<b>63</b>	<b>50</b>
1,2-Dichloroethane	<0.33	<0.33
4-Methyl-2-Pentanone	<1.5	<1.5
Acetone	<b>6.2</b>	<b>4.2</b>
Aliphatic Hydrocarbon		
Benzene	<0.42	<0.42
Bromodichloromethane	<0.40	<0.40
Bromoform	<0.41	<0.41
Chlorobenzene	<0.36	<0.36
Chloroform	<b>0.45</b>	<b>3.2</b>
cis-1,2-Dichloroethene	<b>47</b>	<b>93</b>
Cyclic Hydrocarbon		
Cyclohexene		
Dibromochloromethane	<0.33	<0.33
Dichlorodifluoromethane (Freon 12)	<0.48	<0.48
Dichlorofluoromethane		
Ethylbenzene	<0.41	<0.41
ethylmethylbenzene isomer		
Isopropylbenzene (cumene)	<0.34	<0.34
Methyl Cyhexene		
Methyl Ethyl Ketone (2-Butanone)	<1.7	<1.7
Methylene Chloride	<0.43	<0.43
Naphthalene	<b>0.54</b>	<0.36
Tetrachloroethene	<b>59</b>	<b>73</b>
Toluene	<0.36	<0.36
trans-1,2-Dichloroethene	<b>0.87</b>	<b>1.1</b>
Trichloroethene	<b>16</b>	<b>29</b>
Trichlorofluoromethane	<b>1.4</b>	<b>2.0</b>
trimethylbenzene isomer		
Vinyl Chloride	<0.43	<0.43
Xylenes (total)	<1.1	<1.1

**Notes:**

Values reported as micrograms per liter (ug/l)

Blank spaces indicate constituent not analyzed

ft (bgs) = feet below ground surface

Dup = Duplicate Sample

## **APPENDIX B**

### **Encroachment Permits**

## EXCAVATION PERMIT

Permit No. X-9861

## CITY OF SANTA FE SPRINGS

Name: Misty Yank - Gensyntec Consultants Telephone: 714-969-0800Address: 2100 Main St, Suite 150, Huntington Beach, CA 92698

HEREBY MAKES APPLICATION FOR PERMISSION TO EXCAVATE IN THE PUBLIC HIGHWAY SUBJECT TO THE PROVISIONS REQUIRED BY SECTION 19 OF THE SANTA FE SPRINGS MUNICIPAL CODE AND ANY SPECIFIED REQUIREMENTS ATTACHED HERETO.

IN CONSIDERATION OF THE GRANTING OF THIS PERMIT, IT IS AGREED BY THE APPLICANT THAT THE CITY OF SANTA FE SPRINGS AND ANY OFFICIAL OR EMPLOYEE THEREOF SHALL BE SAVED HARMLESS BY THE APPLICANT FROM ANY LIABILITY OR RESPONSIBILITY OCCURRING AS THE PROXIMATE RESULT OF ANY WORK UNDERTAKEN UNDER THE TERMS OF THIS APPLICATION AND THE PERMIT OR PERMITS WHICH MAY BE GRANTED IN RESPONSE THERETO, AND THAT ALL SAID LIABILITIES ARE HEREBY ASSUMED BY THE APPLICANT. IT IS FURTHER AGREED THAT IF ANY TANK, PIPE, CONDUIT, DUCT OR TUNNEL PLACED IN THE EXCAVATION OR OBSTRUCTION FOR WHICH THIS PERMIT IS ISSUED INTERFERES WITH THE FUTURE USE OF THE HIGHWAY BY THE GENERAL PUBLIC, THEN THE APPLICANT AND HIS SUCCESSORS OR ASSIGNS WILL AT HIS OWN EXPENSE REMOVE SUCH TANK, PIPE, CONDUIT, DUCT, OR TUNNEL, OR RELOCATE AT A LOCATION DESIGNATED BY THE DIRECTOR OF PUBLIC WORKS OF THE CITY OF SANTA FE SPRINGS.

Purpose: Temporary groundwater sampling pointsLocation: Dice Rd & AltamarStarting Date: 3/12/07 Completion Date: 3/14/07City Business License No.: 6005-004750450 State License No.: 59-2355134

## Fees

Engineering and Inspection Fee 88<sup>00</sup>Issuance Fee 44<sup>00</sup>**TOTAL FEE** #132<sup>00</sup>

## Issuance

The undersigned guarantees that if the backfill or street surface fails within two years from the time repairs are made, he shall pay the cost to the City for repairing said backfill or street surface.

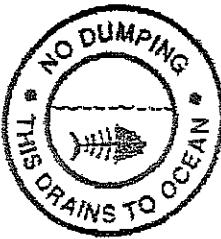
 Signed:Misty Yank

Owner or Authorized Agent

Approved By: JPDate: 3/8/07

## Finance

Work Order #: 110-397-4530-BC00



DIGITALERT



NOTIFY UNDERGROUND SERVICE ALERT (USA) 2  
DAYS PRIOR TO STARTING WORK (800) 227-2600.  
This permit is not valid unless a USA ticket number has  
been issued for this work. [www.digalert.org](http://www.digalert.org)

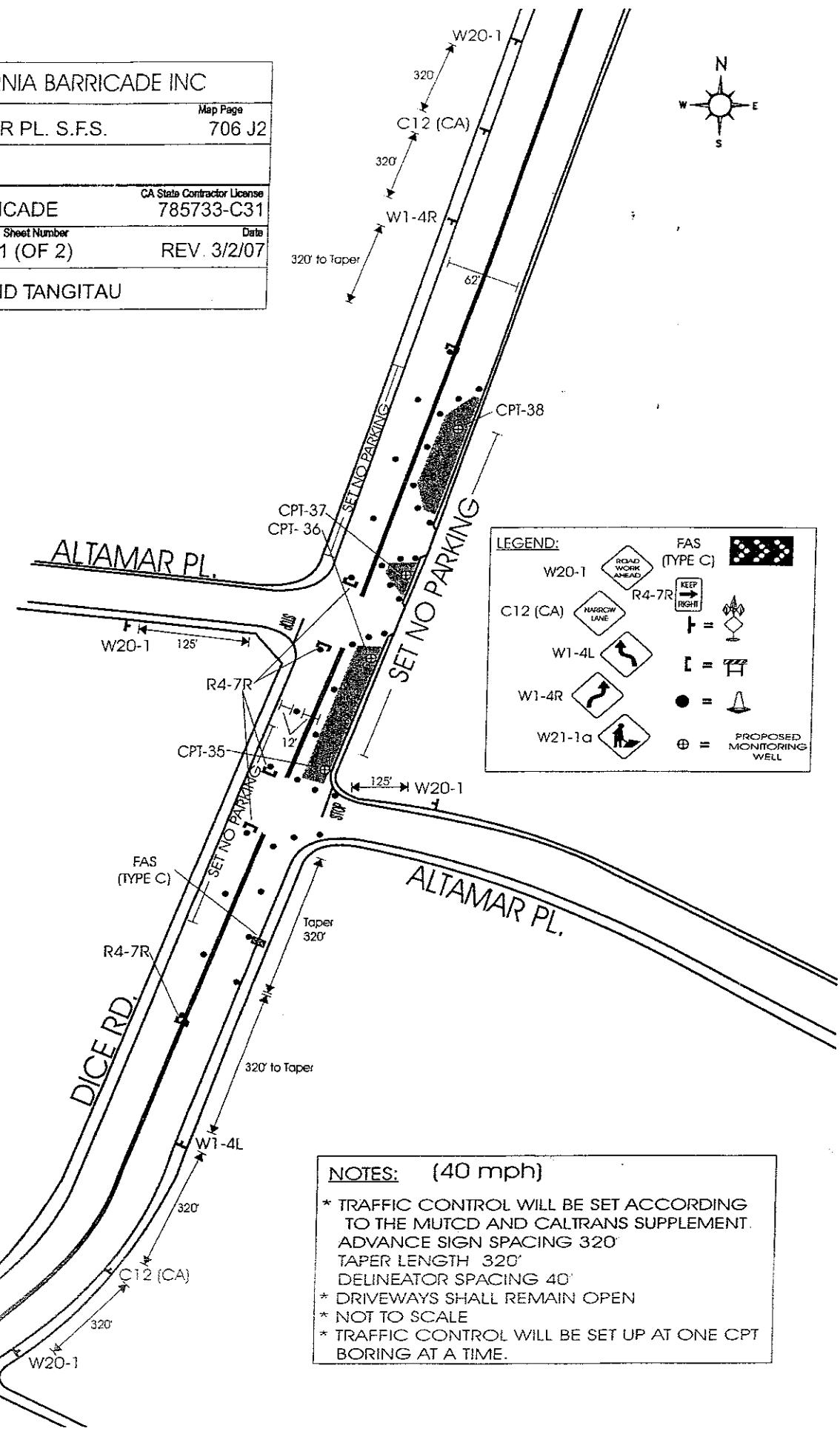
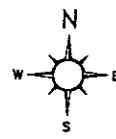
24 HOUR

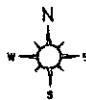
NOTICE BEFORE STARTING  
WORK IS REQUIRED

Tennillee

Note: This Permit is VOID if work is not started within 60 days and continued to completion. City must be notified 24 hours prior to the placement of any base or pavement surface.

Owner	CALIFORNIA BARRICADE INC	
Project Name	Map Page	
DICE RD. & ALTAMAR PL. S.F.S.	706 J2	
Prime Contractor	GEOSYNTEC	
Traffic Control Contractor	CA State Contractor License	
CALIFORNIA BARRICADE	785733-C31	
Phone	Sheet Number	Date
714 558 8474	1 (OF 2)	REV. 3/2/07
Prepared By	DAVID TANGITAU	



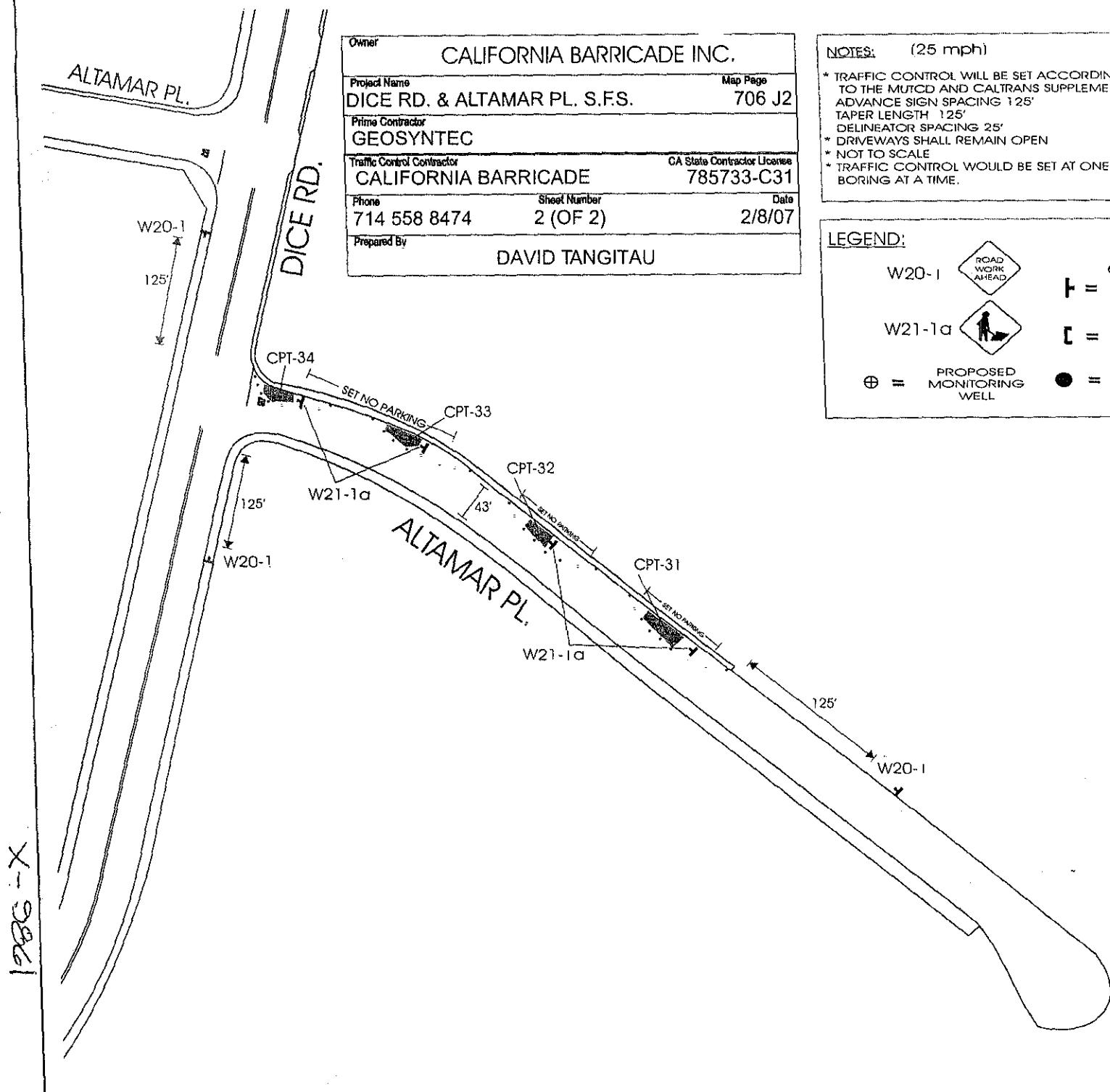
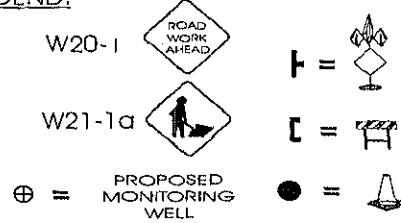


Owner	CALIFORNIA BARRICADE INC.		
Project Name	Map Page	706 J2	
DICE RD. & ALTAMAR PL. S.F.S.			
Prime Contractor			
GEOSYNTEC			
Traffic Control Contractor	CA State Contractor License		
CALIFORNIA BARRICADE			785733-C31
Phone	Sheet Number	Date	
714 558 8474	2 (OF 2)	2/8/07	
Prepared By	DAVID TANGITAU		

NOTES: (25 mph)

- \* TRAFFIC CONTROL WILL BE SET ACCORDING TO THE MUTCD AND CALTRANS SUPPLEMENT.
- \* ADVANCE SIGN SPACING 125'
- \* TAPER LENGTH 125'
- \* DELINEATOR SPACING 25'
- \* DRIVEWAYS SHALL REMAIN OPEN
- \* NOT TO SCALE
- \* TRAFFIC CONTROL WOULD BE SET AT ONE CPT BORING AT A TIME.

LEGEND:



125'-X

## APPENDIX C

### CPT Logs



# GREGG IN SITU, INC.

GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATION SERVICES

March 15, 2007

GeoSyntec  
Attn: Lisa Van Tassell  
475 14<sup>th</sup> Street, Suite 400  
Oakland, California, 94612

Subject: CPT Site Investigation  
McKesson  
Santa Fe Springs, Los Angeles  
GREGG Project Number: 07-052SH

Dear Ms. Tassell:

The following report presents the results of GREGG Drilling & Testing's Cone Penetration Test investigation for the above referenced site. The following testing services were performed:

1	Cone Penetration Tests	(CPTU)	<input checked="" type="checkbox"/>
2	Pore Pressure Dissipation Tests	(PPD)	<input type="checkbox"/>
3	Seismic Cone Penetration Tests	(SCPTU)	<input type="checkbox"/>
4	Resistivity Cone Penetration Tests	(RCPTU)	<input type="checkbox"/>
5	UVIF Cone Penetration Tests	(UVIFCPTU)	<input type="checkbox"/>
6	Groundwater Sampling	(GWS)	<input checked="" type="checkbox"/>
7	Soil Sampling	(SS)	<input type="checkbox"/>
8	Vapor Sampling	(VS)	<input type="checkbox"/>
9	Vane Shear Testing	(VST)	<input type="checkbox"/>
10	SPT Energy Calibration	(SPTE)	<input type="checkbox"/>

A list of reference papers providing additional background on the specific tests conducted is provided in the bibliography following the text of the report. If you would like a copy of any of these publications or should you have any questions or comments regarding the contents of this report, please do not hesitate to contact our office at (562) 427-6899.

Sincerely,  
GREGG Drilling & Testing, Inc.

Peter Robertson  
Technical Operations



## GREGG IN SITU, INC.

## GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATION SERVICES

## Cone Penetration Test Sounding Summary

-Table 1-

**2726 Walnut Ave • Signal Hill, California 90755 • (562) 427-6899 • FAX (562) 427-3314**

**OTHER OFFICES: SAN FRANCISCO • HOUSTON • SOUTH CAROLINA**

[www.greggdrilling.com](http://www.greggdrilling.com)



GREGG IN SITU, INC.

GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATION SERVICES

## Bibliography

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Zemo, D A., T A. Delfino, J D. Gallinatti, V A. Baker and L R. Hilpert, "Field Comparison of Analytical Results from Discrete-Depth Groundwater Samplers" BAT EnviroProbe and QED HydroPunch, Sixth national Outdoor Action Conference, Las Vegas, Nevada Proceedings, 1992, pp 299-312

Copies of ASTM Standards are available through [www.astm.org](http://www.astm.org)

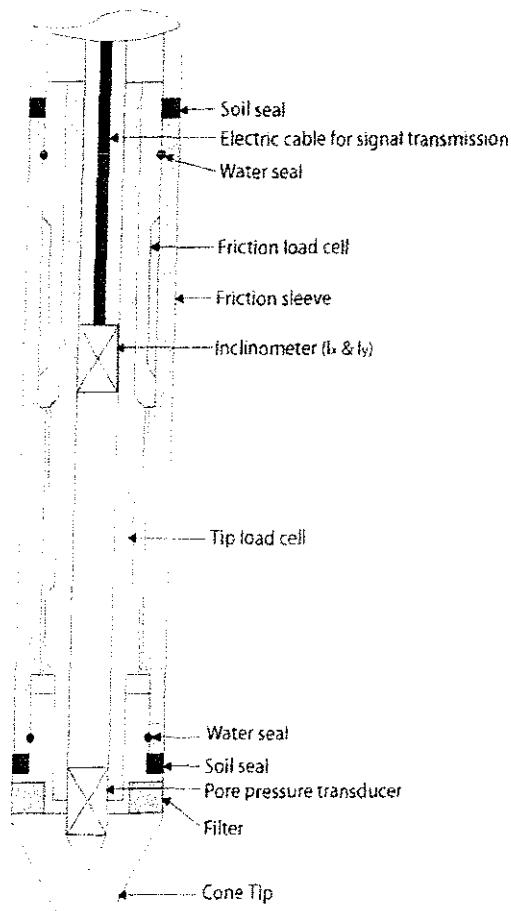


## Cone Penetration Testing Procedure (CPT)

Gregg Drilling & Testing, Inc. carries out all Cone Penetration Tests (CPT) using an integrated electronic cone system, *Figure CPT*. The soundings were conducted using a 20 ton capacity cone with a tip area of  $15 \text{ cm}^2$  and a friction sleeve area of  $225 \text{ cm}^2$ . The cone is designed with an equal end area friction sleeve and a tip end area ratio of 0.85.

The cone takes measurements of cone bearing ( $q_c$ ), sleeve friction ( $f_s$ ) and penetration pore water pressure ( $u_2$ ) at 5-cm intervals during penetration to provide a nearly continuous hydrogeologic log. CPT data reduction and interpretation is performed in real time facilitating on-site decision making. The above mentioned parameters are stored on disk for further analysis and reference. All CPT soundings are performed in accordance with revised (2002) ASTM standards (D 5778-95).

The cone also contains a porous filter element located directly behind the cone tip ( $u_2$ ), *Figure CPT*. It consists of porous plastic and is 5.0mm thick. The filter element is used to obtain penetration pore pressure as the cone is advanced as well as Pore Pressure Dissipation Tests (PPDT's) during appropriate pauses in penetration. It should be noted that prior to penetration, the element is fully saturated with silicon oil under vacuum pressure to ensure accurate and fast dissipation.



*Figure CPT*

When the soundings are complete, the test holes are grouted using a Gregg In Situ support rig. The grouting procedures generally consist of pushing a hollow CPT rod with a "knock out" plug to the termination depth of the test hole. Grout is then pumped under pressure as the tremie pipe is pulled from the hole. Disruption or further contamination to the site is therefore minimized.



## Cone Penetration Test Data & Interpretation

Soil behavior type and stratigraphic interpretation is based on relationships between cone bearing ( $q_c$ ), sleeve friction ( $f_s$ ), and pore water pressure ( $u_2$ ). The friction ratio ( $R_f$ ) is a calculated parameter defined by  $100f_s/q_c$  and is used to infer soil behavior type. Generally:

### Cohesive soils (clays)

- High friction ratio ( $R_f$ ) due to small cone bearing ( $q_c$ )
- Generate large excess pore water pressures ( $u_2$ )

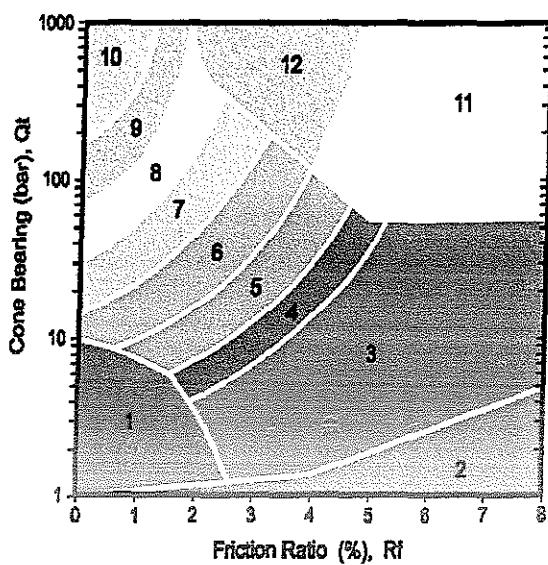
### Cohesionless soils (sands)

- Low friction ratio ( $R_f$ ) due to large cone bearing ( $q_c$ )
- Generate very little excess pore water pressures ( $u_2$ )

A complete set of baseline readings are taken prior to and at the completion of each sounding to determine temperature shifts and any zero load offsets. Corrections for temperature shifts and zero load offsets can be extremely important, especially when the recorded loads are relatively small. In sandy soils, however, these corrections are generally negligible.

The cone penetration test data collected from your site is presented in graphical form in Appendix CPT. The data includes CPT logs of measured soil parameters, computer calculations of interpreted soil behavior types (SBT), and additional geotechnical parameters. A summary of locations and depths is available in Table 1. Note that all penetration depths referenced in the data are with respect to the existing ground surface.

Soil interpretation for this project was conducted using recent correlations developed by Robertson et al, 1990, *Figure SBT*. Note that it is not always possible to clearly identify a soil type based solely on  $q_c$ ,  $f_s$ , and  $u_2$ . In these situations, experience, judgment, and an assessment of the pore pressure dissipation data should be used to infer the soil behavior type.



ZONE	Qt/N	SBT
1	2	Sensitive, fine grained
2	1	Organic materials
3	1	Clay
4	1.5	Silty clay to clay
5	2	Clayey silt to silty clay
6	2.5	Sandy silt to clayey silt
7	3	Silty sand to sandy silt
8	4	Sand to silty sand
9	5	Sand
10	6	Gravely sand to sand
11	1	Very stiff fine grained*
12	2	Sand to clayey sand*

\*over consolidated or cemented

Figure SBT



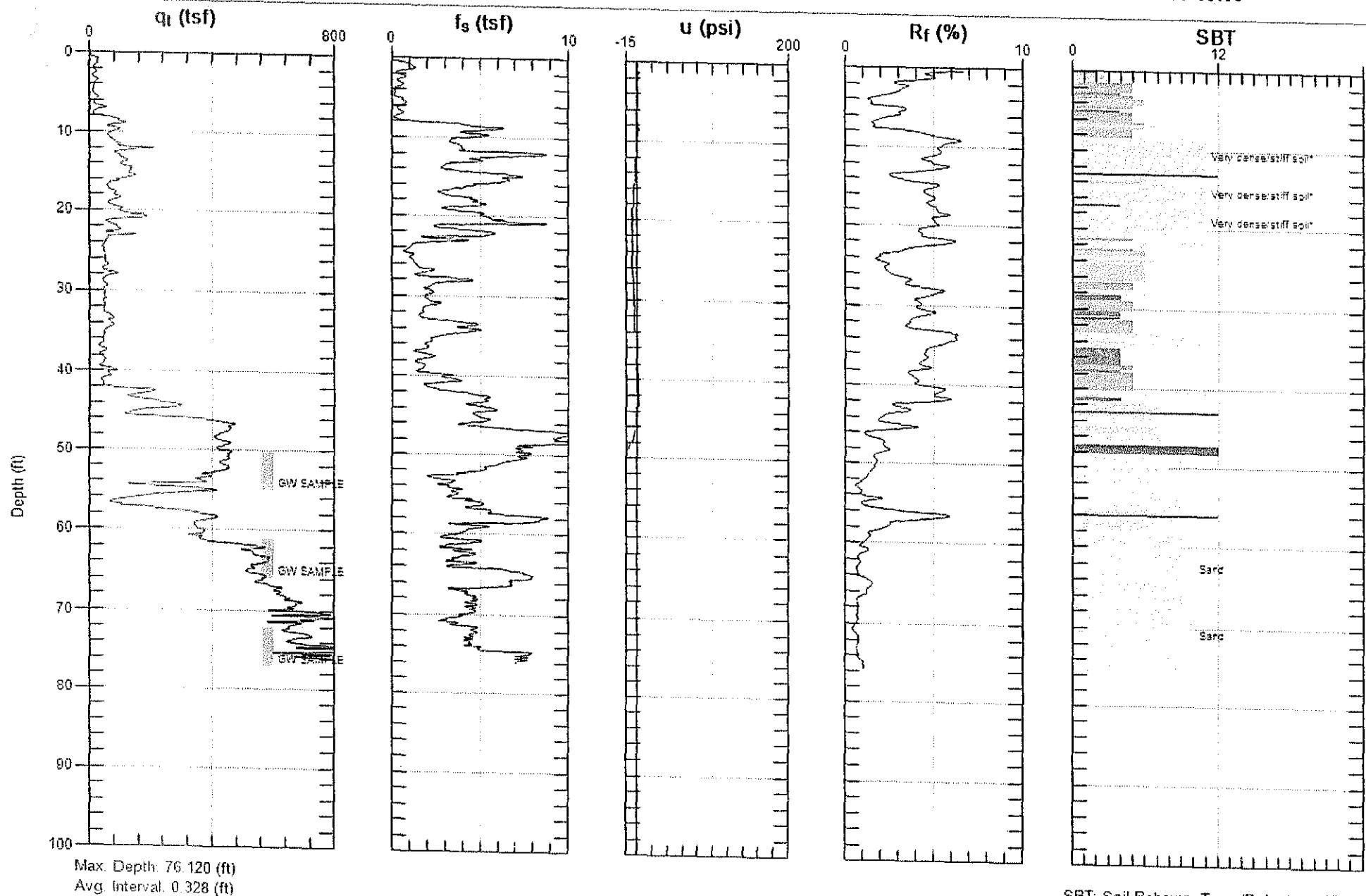
GEOSYNTEC

Site: MCKESSON

Sounding: CPT-31

Engineer: MISTY YANOK

Date: 3/14/2007 09:39



SBT: Soil Behavior Type (Robertson 1990)



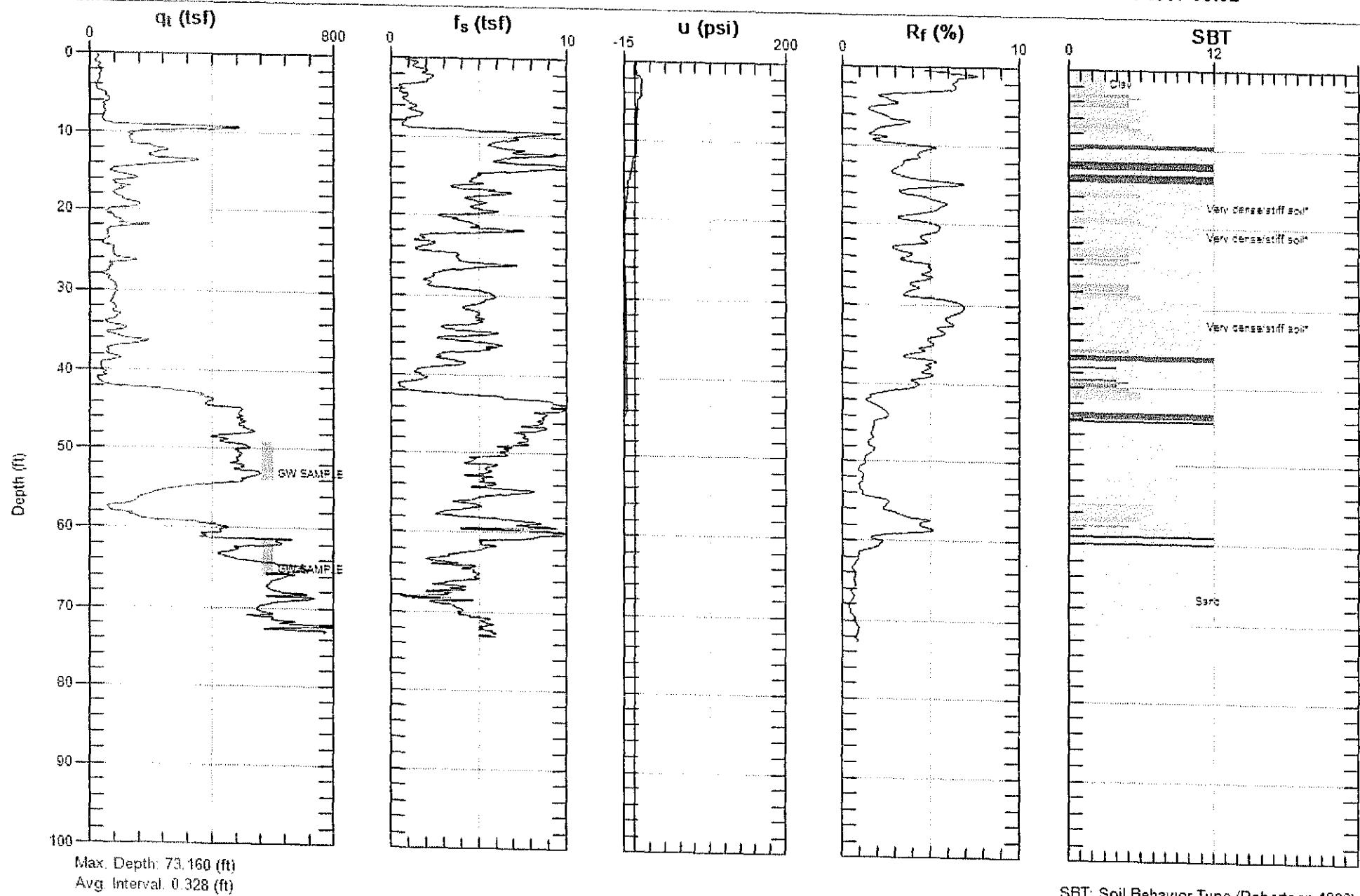
GEOSYNTEC

Site: MCKESSON

Engineer: MISTY YANOK

Sounding: CPT-32

Date: 3/14/2007 08:32



SBT: Soil Behavior Type (Robertson 1990)

GREGG

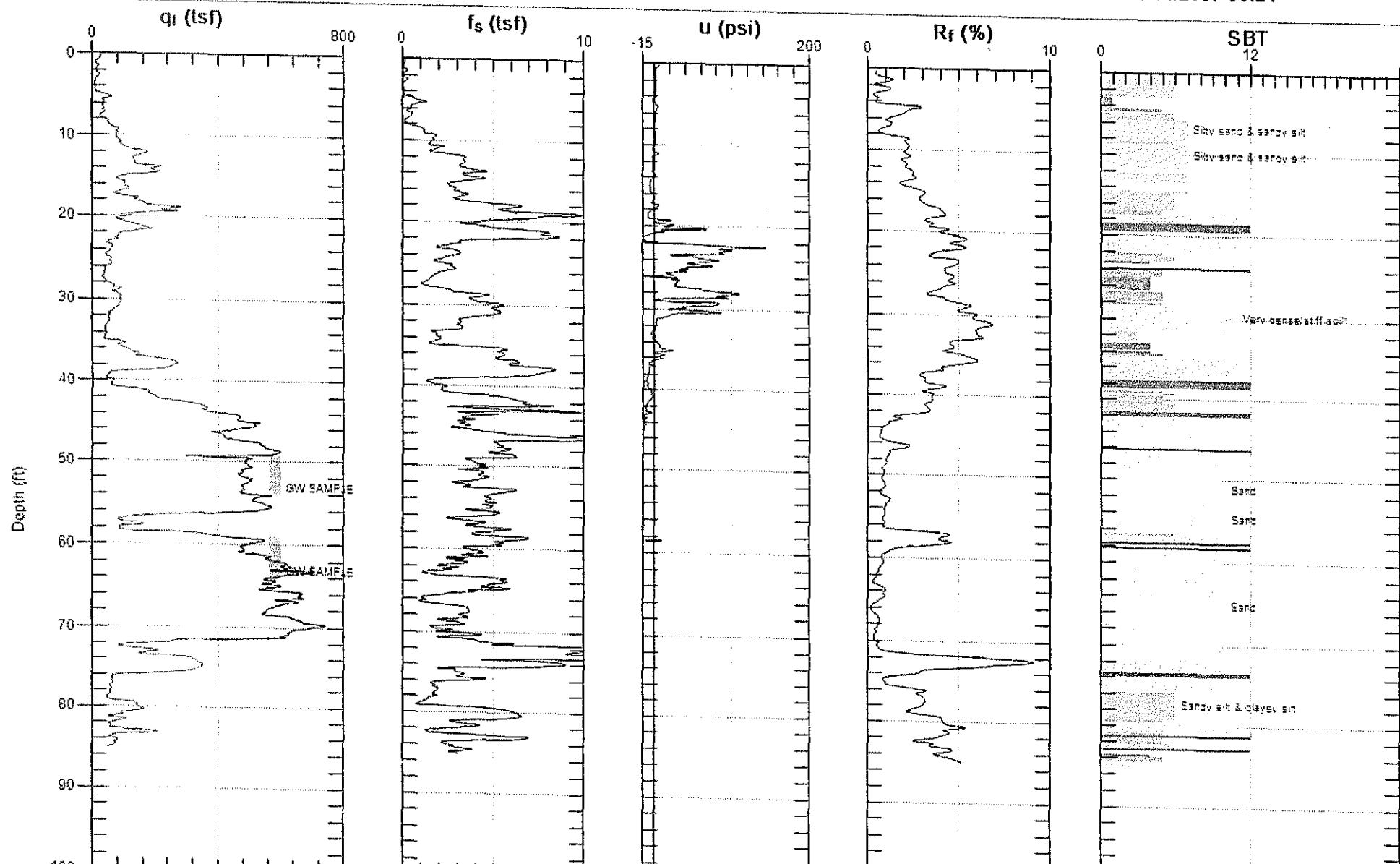
GEOSYNTEC

Site: MCKESSON

Sounding: CPT-33

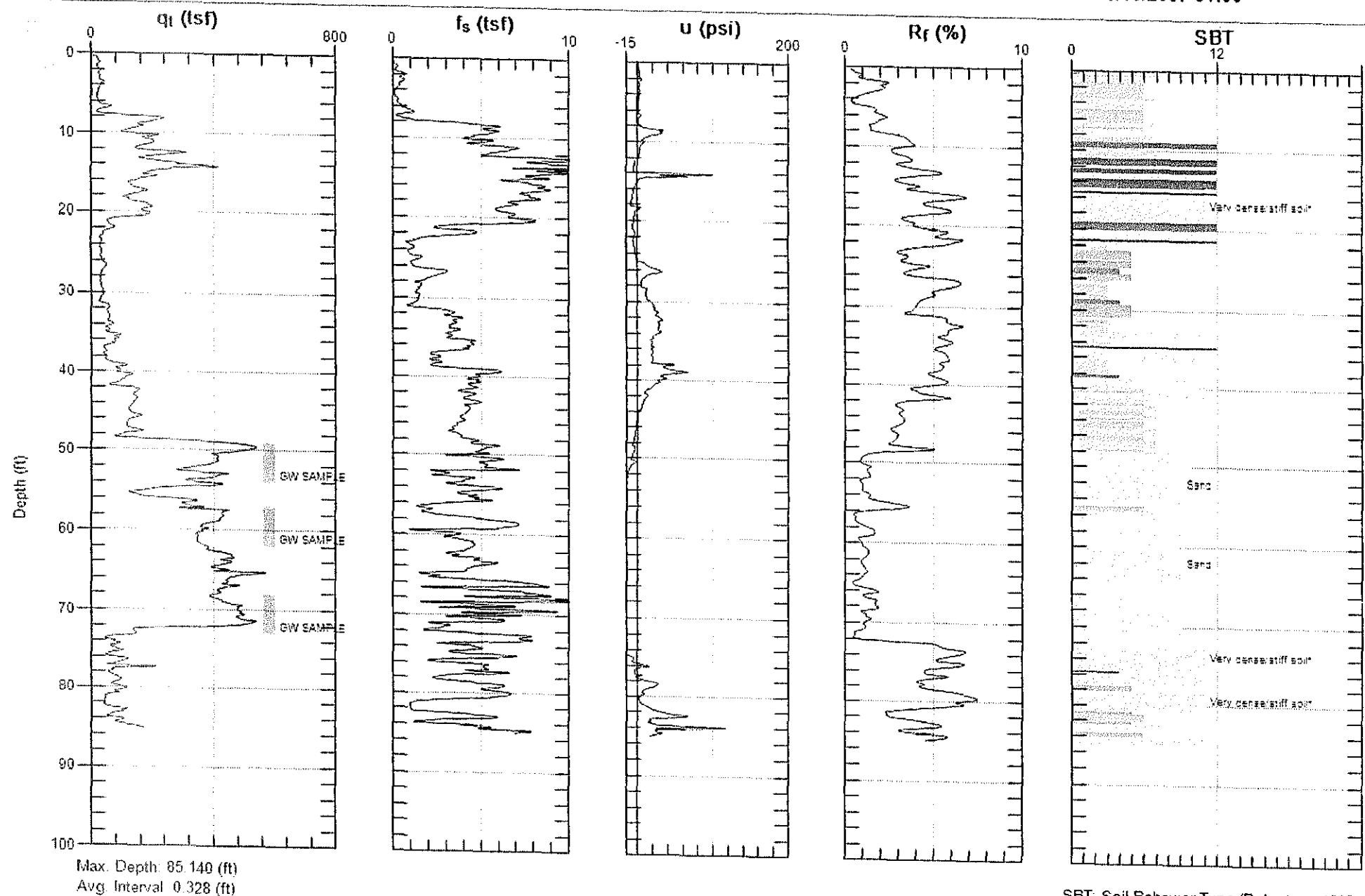
Engineer: MISTY YANOK

Date: 3/14/2007 06:24



Max. Depth: 85.140 (ft)  
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)



SBT: Soil Behavior Type (Robertson 1990)

GREGG

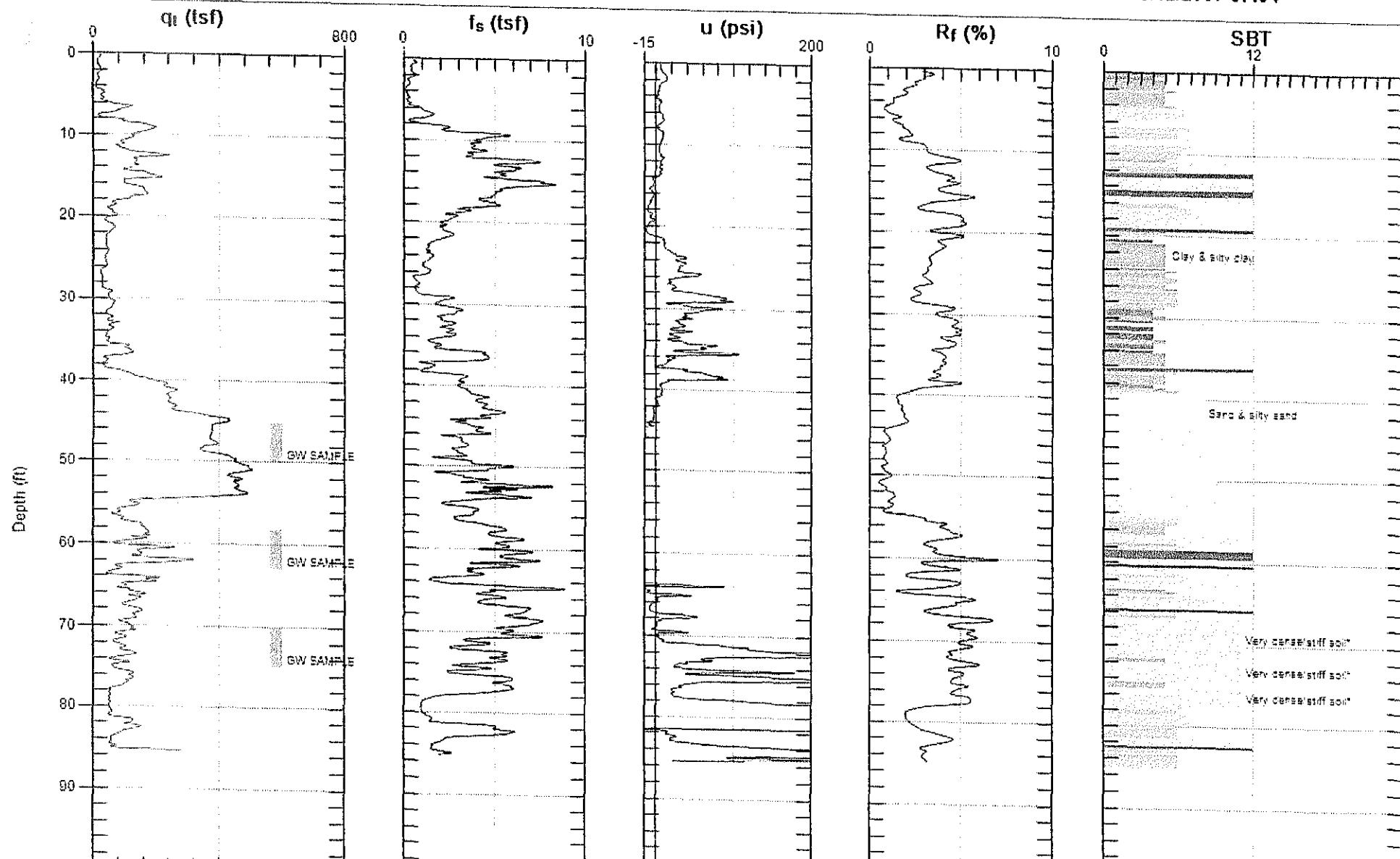
GEOSYNTEC

Site: MCKESSON

Sounding: CPT-35

Engineer: MISTY YANOK

Date: 3/12/2007 07:04



Max. Depth: 85.300 (ft)  
Avg. Interval: 0.328 (ft)

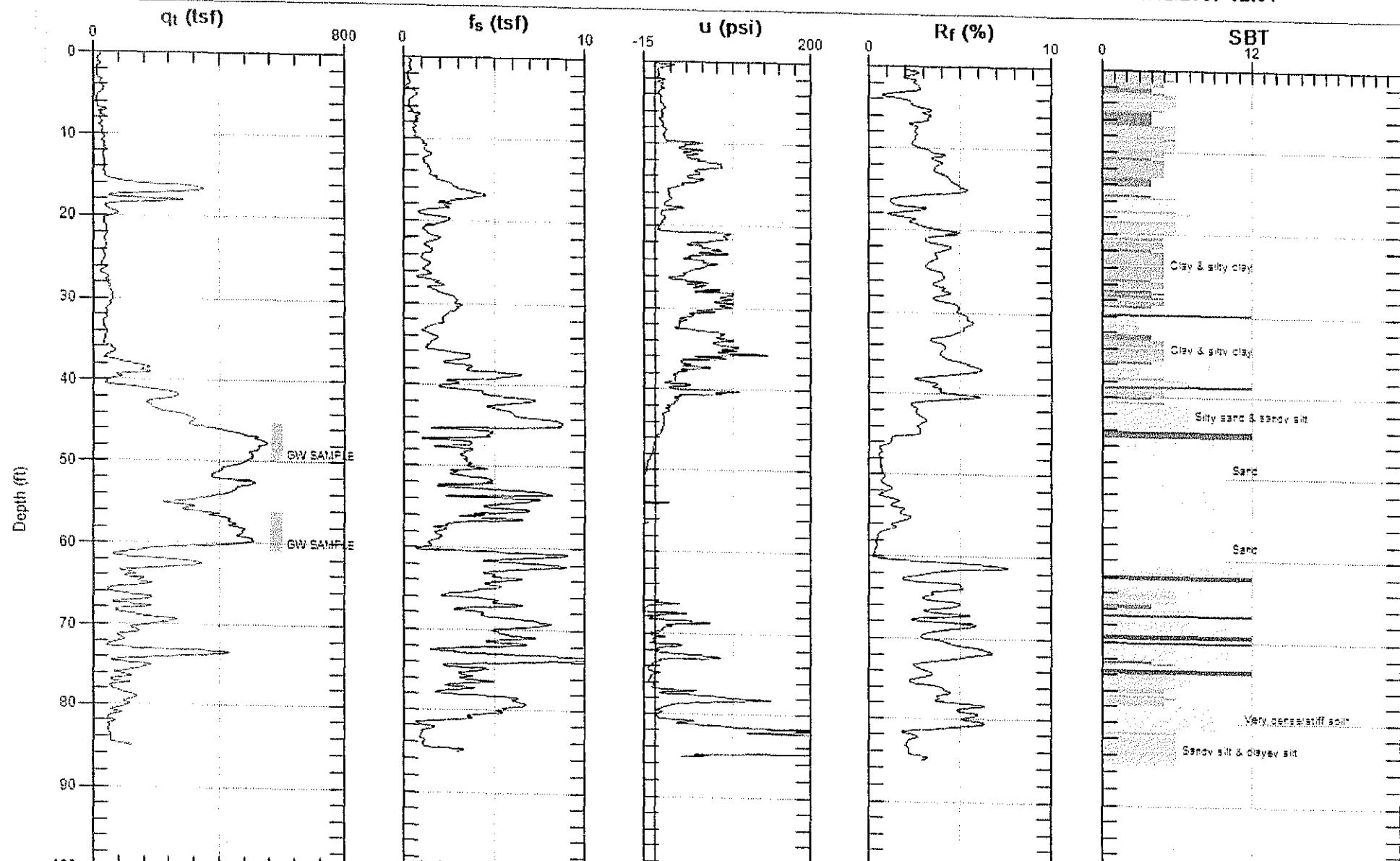
SBT: Soil Behavior Type (Robertson 1990)

Site: MCKESSON

Sounding: CPT-36

Engineer: MISTY YANOK

Date: 3/12/2007 12:51



Max. Depth: 85.140 (ft)  
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)



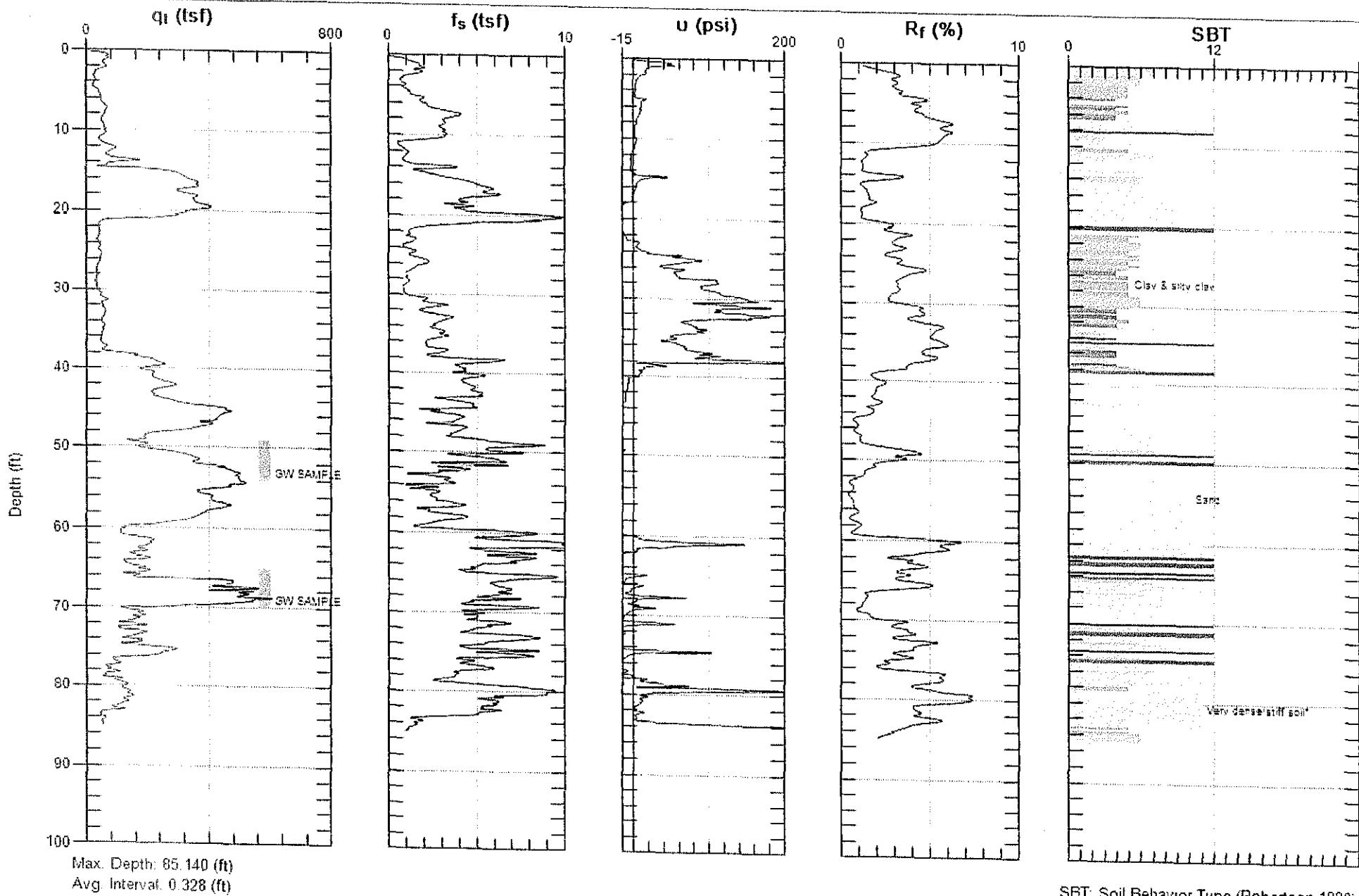
GEOSYNTEC

Site: MCKESSON

Sounding: CPT-37

Engineer: MISTY YANOK

Date: 3/13/2007 07:35



Max. Depth: 85.140 (ft)  
Avg. Interval: 0.328 (ft)

### SBT: Soil Behavior Type (Robertson 1990)



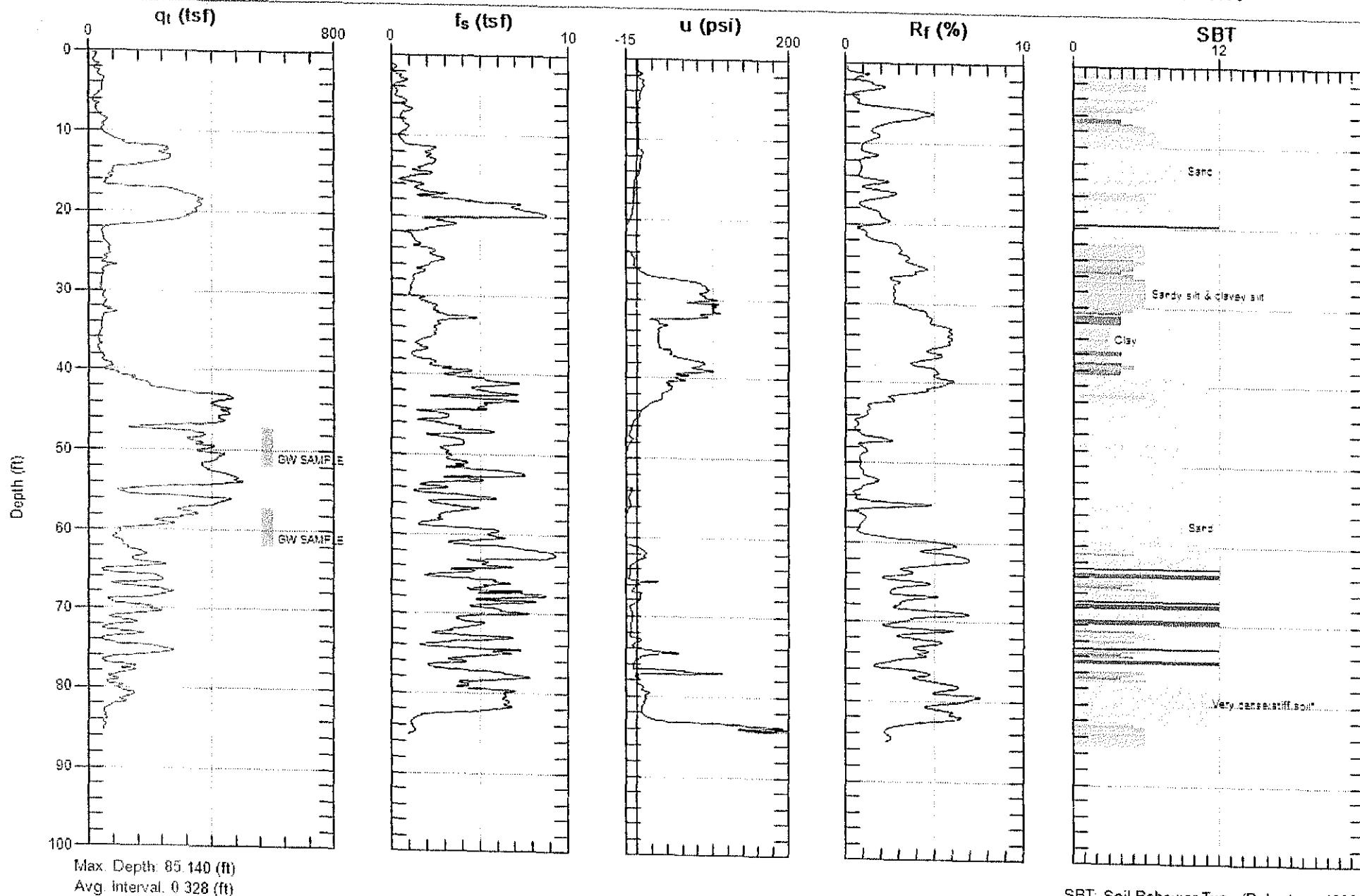
GEOSYNTEC

Site: MCKESSON

Engineer: MISTY YANOK

Sounding: CPT-38

Date: 3/13/2007 10:15



SBT: Soil Behavior Type (Robertson 1990)

March 31, 2007

Lisa Van Tassell  
Geosyntec Consultants  
475 14th Street Suite 450  
Oakland, CA 94612

**RE: McKesson/Project #HA0620-13**

Dear Lisa:

Enclosed are the results of the samples submitted to our laboratory on March 12-14, 2007. For your reference, these analyses have been assigned our service request number P0700256.

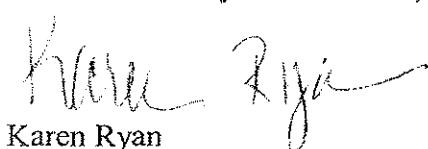
All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Your report contains 154 pages.

Columbia Analytical Services is certified for environmental analyses by NELAP (certificate number: 02115CA); Los Angeles County Laboratory ID (No. 10151); and Arizona Department of Health Services (License number: AZ0694).

If you have any questions, please call me at (805) 577-2083.

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Karen Ryan  
Project Manager

KR

# Columbia Analytical Services, Inc.

## Acronyms

8015M	California DHS LUFI Method
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene/Toluene/Ethylbenzene/Xylenes
CAM	California Assessment Metals
CAS Number	Chemical Abstract Service Registry Number
CFC	Chlorofluorocarbon
COD	Chemical Oxygen Demand
CRDL	Contract Required Detection Limit
D	Detected; result must be greater than zero.
DL	Detected; result must be greater than the detection limit.
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOH or DHS	Department of Health Services
E LAP	Environmental Laboratory Accreditation Program
EPA	U S. Environmental Protection Agency
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MDL	Method Detection Limit
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl- <i>tert</i> -Butyl Ether
NA	Not Applicable
NC	Not Calculated
ND	None Detected at or above the Method Reporting/Detection Limit (MRL/MDL)
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	<i>Standard Methods for the Examination of Water and Wastewater</i> , 18th Ed., 1992.
SILC	Solubility Threshold Limit Concentration
SW	<i>Test Methods for Evaluating Solid Waste, Physical/Chemical Methods</i> , SW-846, Third Edition, 1986 and as amended by Updates I, II, IIA, and IIB
TCLP	Toxicity Characteristics Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

## Qualifiers

U	Undetected at or above MDL/MRL (PQL).
J	Estimated concentration. Analyte detected above MDL, but below MRL (PQL).
B	Hit above MRL (PQL) also found in Method Blank.
E	Analyte concentration above high point of ICAL.
N	Presumptive evidence of compound
D	Result from dilution.
X	See case narrative.

## COLUMBIA ANALYTICAL SERVICES, INC.

Client: Geosyntec Consultants  
Project: McKesson/HA0620-13  
Sample Matrix: Water

Service Request No.: P0700256  
Date Received: 3/12-14/07

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test

#### Sample Receipt

The samples were received for analysis at Columbia Analytical Services on 3/12-14/07. Any discrepancies were noted upon initial sample inspection, and recorded on the Client Notification Form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored at 4°C upon receipt at the laboratory

#### Volatile Organic Compounds by EPA Method 8260B

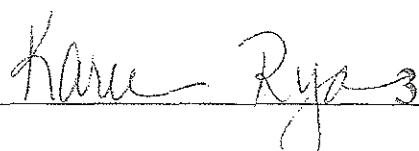
The upper control criterion was exceeded for the following analytes in Continuing Calibration Verification (CCV) PWG0700477: 1,1,1,2-Tetrachloroethane, Bromoform, and Dibromochloromethane. The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem equates to a potential high bias, the data quality is not affected. No further corrective action was required

Samples CPT-35-75 (P0700256-004), CPT-33-54 (P0700256-016), CPT-32-54 (P0700256-018), CPT-32-66 (P0700256-019), CPT-31-55 (P0700256-020), CPT-31-66 (P0700256-021), CPT-31-77 (P0700256-022) required a dilution due to the presence of elevated levels of target analyte. The reporting limits are adjusted to reflect the dilution

The control criteria were exceeded for all the surrogates in CPT-37-70DMS (PWG0700478-2). The error associated with an elevated recovery equates to a high bias. The quality of the sample data is not significantly affected. No further corrective action was taken.

The duplicate matrix spike recoveries and the relative percent difference (RPD) of 1,1-Dichloroethane and Tetrachloroethene (PCE) for sample CPT-37-70DMS were outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential high bias in this matrix. No further corrective action was appropriate

Approved by

  
Karen Ryas

Date

3/31/07

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Geosyntec Consultants      Service Request No.: P0700256  
Project: McKesson/HA0620-13      Date Received: 3/12-14/07  
Sample Matrix: Water

CASE NARRATIVE

Volatile Organic Compounds by EPA Method 8260B

The upper control criterion was exceeded for several analytes in Laboratory Control Samples (LCSs) PWG0700476 and PWG0700478. The analytes in question were not detected in the associated field samples. The error associated with elevated recovery equates to a high bias. The sample data is not significantly affected. No further corrective action was taken.

The spike recovery of 1,1-Dichloroethene for Laboratory Control Sample (LCS) PWG0700476-1 was outside the laboratory lower control criterion but passed the method control criterion. The analyte in question was detected in the associated field samples, CPT-35-50 (P0700256-002), CPT-35-63 (P0700256-003), CPT-35-75 (P0700256-004), CPT-36-61 (P0700256-006), and CPT-38-62 (P0700256-011). The Duplicate Laboratory Control Sample (DLCS) was within acceptance limits, and a Method Reporting Limit (MRL) check standard containing the analyte of concern was analyzed. The MRL check standard verifies instrument sensitivity was adequate to detect the analyte at the MRL on the day of analysis. Since the analyte passed the method control criteria of 70%-130%, and any results for this analyte in the associated samples are greater than the MRL, the data is not significantly affected. The data is flagged to indicate the problem.

The primary evaluation criterion was exceeded for Bromoform in Initial Calibration (ICAL) ID 1262 and 1263. The primary evaluation criterion was also exceeded for Trichlorofluoromethane in Initial Calibration (ICAL) ID 1263. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 8.4% for ICAL 1262 and 9.3% for ICAL 1263. The calibrations meet the alternative evaluation criteria.

Second source verification standards are analyzed following instrument calibration to verify the accuracy of the calibration standards. This check is evaluated using the same criteria as continuing calibration verification. The upper control criterion was exceeded for Dichlorodifluoromethane in the second source verification for Initial Calibration (ICAL) ID 1262. The field samples analyzed using this calibration did not contain the analyte in question. Since the apparent problem equates to a high bias, the data quality had not been significantly affected. No further corrective action was taken.

Approved by

Karen Riga 4

Date

3/31/07

## COLUMBIA ANALYTICAL SERVICES, INC.

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256

**Cover Page - Organic Analysis Data Package**  
**Volatile Organic Compounds**

Sample Name	Lab Code	Date Collected	Date Received
TB-1	P0700256-001	03/12/2007	03/12/2007
CPT-35-50	P0700256-002	03/12/2007	03/12/2007
CPT-35-63	P0700256-003	03/12/2007	03/12/2007
CPT-35-75	P0700256-004	03/12/2007	03/12/2007
CPT-36-50	P0700256-005	03/12/2007	03/12/2007
CPI-36-61	P0700256-006	03/12/2007	03/12/2007
TB-1	P0700256-007	03/13/2007	03/13/2007
CPT-37-54	P0700256-008	03/13/2007	03/13/2007
CPI-37-70	P0700256-009	03/13/2007	03/13/2007
CPI-38-52	P0700256-010	03/13/2007	03/13/2007
CPT-38-62	P0700256-011	03/13/2007	03/13/2007
CPT-34-54	P0700256-012	03/13/2007	03/13/2007
CPT-34-62	P0700256-013	03/13/2007	03/13/2007
CPT-34-73	P0700256-014	03/13/2007	03/13/2007
TB-1	P0700256-015	03/14/2007	03/14/2007
CPT-33-54	P0700256-016	03/14/2007	03/14/2007
CPI-33-64	P0700256-017	03/14/2007	03/14/2007
CPI-32-54	P0700256-018	03/14/2007	03/15/2007
CPT-32-66	P0700256-019	03/14/2007	03/14/2007
CPT-31-55	P0700256-020	03/14/2007	03/14/2007
CPI-31-66	P0700256-021	03/14/2007	03/14/2007
CPT-31-77	P0700256-022	03/14/2007	03/14/2007
CPT-37-70MS	PWG0700478-1	03/13/2007	03/13/2007
CPT-37-70DMS	PWG0700478-2	03/13/2007	03/13/2007

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature

Sig: \_\_\_\_\_

Name: Kristiana Miller

Date: 3/23/07

5

Title: Chemist

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Collected: 03/12/2007  
 Date Received: 03/12/2007

## Volatile Organic Compounds

Sample Name: IB-1 Units: ug/L  
 Lab Code: P0700256-001 Basis: NA  
 Extraction Method: EPA 5030B Level: Low  
 Analysis Method: 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	*
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichlorotrifluoroethane	ND U	2.0	1.0	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethane	ND U	0.50	0.35	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethylene	ND U	0.50	0.45	1	03/21/07	03/21/07	PWG0700476	*
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700476	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700476	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloropropane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700476	
Acetone	ND U	10	2.2	1	03/21/07	03/21/07	PWG0700476	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700476	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromodichloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

## Volatile Organic Compounds

**Sample Name:** TB-1 **Units:** ug/L  
**Basis:** NA  
**Lab Code:** P0700256-001

**Extraction Method:** EPA 5030B **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700476	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700476	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700476	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
Chloroform	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
cis-1,2-Dichloroethene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/21/07	03/21/07	PWG0700476	
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700476	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
Dichlorodifluoromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700476	
Ethene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,1-Chlorobutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700476	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700476	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700476	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
Naphthalene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700476	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
Tetrachloroethene (PCE)	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
trans-1,2-Dichloroethene	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700476	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
Trichloroethene (TCE)	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
Trichlorofluoromethane	ND U	1.0	0.60	1	03/21/07	03/21/07	PWG0700476	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700476	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700476	

\* See Case Narrative

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

## Volatile Organic Compounds

**Sample Name:** TB-1                                           **Units:** ug/L  
**Lab Code:** P0700256-001                                   **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	111	73-129	03/21/07	Acceptable
Toluene-d8	107	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	99	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

## Volatile Organic Compounds

**Sample Name:** CPI-35-50      **Units:** ug/L  
**Lab Code:** P0700256-002      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	*
1,1,1-Trichloroethane (TCA)	0.51	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichlorotrifluoroethane	2.4	2.0	1.0	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethane	23	0.50	0.35	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethene	63	0.50	0.45	1	03/21/07	03/21/07	PWG0700476	*
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700476	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700476	
1-Bromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloropropane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700476	
Acetone	6.2 J	10	2.2	1	03/21/07	03/21/07	PWG0700476	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700476	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromodichloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Collected: 03/12/2007  
 Date Received: 03/12/2007

## Volatile Organic Compounds

Sample Name: CPT-35-50 Units: ug/L  
 Lab Code: P0700256-002 Basis: NA  
 Extraction Method: EPA 5030B Level: Low  
 Analysis Method: 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700476	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700476	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700476	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
<b>Chloroform</b>	<b>0.45 J</b>	<b>0.50</b>	<b>0.40</b>	<b>1</b>	<b>03/21/07</b>	<b>03/21/07</b>	<b>PWG0700476</b>	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
<b>cis-1,2-Dichloroethene</b>	<b>47</b>	<b>0.50</b>	<b>0.39</b>	<b>1</b>	<b>03/21/07</b>	<b>03/21/07</b>	<b>PWG0700476</b>	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/21/07	03/21/07	PWG0700476	
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700476	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
Dichlorodifluoromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700476	
Ethylbenzene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
Hexachlorobutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700476	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700476	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700476	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
<b>Naphthalene</b>	<b>0.54 J</b>	<b>1.0</b>	<b>0.36</b>	<b>1</b>	<b>03/21/07</b>	<b>03/21/07</b>	<b>PWG0700476</b>	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
Tetrachloroethene (PCE)	<b>59</b>	<b>0.50</b>	<b>0.38</b>	<b>1</b>	<b>03/21/07</b>	<b>03/21/07</b>	<b>PWG0700476</b>	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
<b>trans-1,2-Dichloroethene</b>	<b>0.87</b>	<b>0.50</b>	<b>0.43</b>	<b>1</b>	<b>03/21/07</b>	<b>03/21/07</b>	<b>PWG0700476</b>	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
<b>Trichloroethene (TCE)</b>	<b>16</b>	<b>0.50</b>	<b>0.38</b>	<b>1</b>	<b>03/21/07</b>	<b>03/21/07</b>	<b>PWG0700476</b>	
<b>Trichlorofluoromethane</b>	<b>1.4</b>	<b>1.0</b>	<b>0.60</b>	<b>1</b>	<b>03/21/07</b>	<b>03/21/07</b>	<b>PWG0700476</b>	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700476	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700476	

\* See Case Narrative

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

### Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

## Volatile Organic Compounds

**Sample Name:** CPT-35-50      **Units:** ug/L  
**Lab Code:** P0700256-002      **Basis:** NA

Surrogate Name	% Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	111	73-129	03/21/07	Acceptable
Toluene-d8	104	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	99	63-118	03/21/07	Acceptable

Cet. ans:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

## Volatile Organic Compounds

**Sample Name:** CPT-35-63                    **Units:** ug/l  
**Lab Code:** P0700256-003                    **Basis:** NA  
**Extraction Method:** EPA 5030B                    **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	*
1,1,1-Trichloroethane (TCA)	1.1	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichlorotrifluoroethane	6.8	2.0	1.0	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethane	45	0.50	0.35	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethene	50	0.50	0.45	1	03/21/07	03/21/07	PWG0700476	*
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700476	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700476	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloropropane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700476	
Acetone	4.2 J	10	2.2	1	03/21/07	03/21/07	PWG0700476	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700476	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromodichloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

## Volatile Organic Compounds

**Sample Name:** CPT-35-63      **Units:** ug/L  
**Lab Code:** P0700256-003      **Basis:** NA

**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700476	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700476	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700476	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
Chloroform	3.2	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
cis-1,2-Dichloroethene	93	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/21/07	03/21/07	PWG0700476	
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700476	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
Dichlorodifluoromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700476	
Ethene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
Heptalorbutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700476	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700476	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700476	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
Naphthalene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700476	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
Tetrachloroethene (PCE)	73	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
trans-1,2-Dichloroethene	1.1	0.50	0.43	1	03/21/07	03/21/07	PWG0700476	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
Trichloroethene (TCE)	29	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
Trichlorofluoromethane	2.0	1.0	0.60	1	03/21/07	03/21/07	PWG0700476	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700476	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700476	

\* See Case Narrative

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

**Volatile Organic Compounds**

**Sample Name:** CPT-35-63                                           **Units:** ug/L  
**Lab Code:** P0700256-003                                           **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	116	73-129	03/21/07	Acceptable
Toluene-d8	109	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	102	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

## Volatile Organic Compounds

**Sample Name:** CPI-35-75      **Units:** ug/L  
**Lab Code:** P0700256-004      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	1.0	0.74	2	03/21/07	03/21/07	PWG0700476	*
1,1,1-Trichloroethane (TCA)	ND U	1.0	0.92	2	03/21/07	03/21/07	PWG0700476	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.74	2	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichloroethane	ND U	1.0	0.80	2	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichlorotrifluoroethane	8.5 D	4.0	2.0	2	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethane	3.2 D	1.0	0.70	2	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethene	69 D	1.0	0.90	2	03/21/07	03/21/07	PWG0700476	*
1,1-Dichloropropene	ND U	1.0	0.92	2	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichlorobenzene	ND U	2.0	0.78	2	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichloropropane	ND U	1.0	0.82	2	03/21/07	03/21/07	PWG0700476	
1,2,4-Trichlorobenzene	ND U	2.0	0.90	2	03/21/07	03/21/07	PWG0700476	
1,2,4-Trimethylbenzene	ND U	2.0	0.72	2	03/21/07	03/21/07	PWG0700476	
bromo-3-chloropropane	ND U	4.0	1.6	2	03/21/07	03/21/07	PWG0700476	
1,2-Dibromoethane (EDB)	ND U	2.0	0.76	2	03/21/07	03/21/07	PWG0700476	
1,2-Dichlorobenzene	ND U	1.0	0.72	2	03/21/07	03/21/07	PWG0700476	
1,2-Dichloroethane (EDC)	ND U	1.0	0.66	2	03/21/07	03/21/07	PWG0700476	
1,2-Dichloropropane	ND U	1.0	0.80	2	03/21/07	03/21/07	PWG0700476	
1,3,5-Trimethylbenzene	ND U	2.0	0.80	2	03/21/07	03/21/07	PWG0700476	
1,3-Dichlorobenzene	ND U	1.0	0.66	2	03/21/07	03/21/07	PWG0700476	
1,3-Dichloropropane	ND U	1.0	0.82	2	03/21/07	03/21/07	PWG0700476	
1,4-Dichlorobenzene	ND U	1.0	0.74	2	03/21/07	03/21/07	PWG0700476	
2,2-Dichloropropane	ND U	1.0	0.76	2	03/21/07	03/21/07	PWG0700476	
2-Butanone (MEK)	ND U	20	3.4	2	03/21/07	03/21/07	PWG0700476	
2-Chlorotoluene	ND U	2.0	0.80	2	03/21/07	03/21/07	PWG0700476	
2-Hexanone	ND U	20	3.4	2	03/21/07	03/21/07	PWG0700476	
4-Chlorotoluene	ND U	2.0	0.76	2	03/21/07	03/21/07	PWG0700476	
4-Isopropyltoluene	ND U	2.0	0.68	2	03/21/07	03/21/07	PWG0700476	
4-Methyl-2-pentanone (MIBK)	ND U	20	3.0	2	03/21/07	03/21/07	PWG0700476	
Acetone	8.0 JD	20	4.4	2	03/21/07	03/21/07	PWG0700476	
Benzene	ND U	1.0	0.84	2	03/21/07	03/21/07	PWG0700476	
Bromobenzene	ND U	2.0	0.80	2	03/21/07	03/21/07	PWG0700476	
Bromochloromethane	ND U	1.0	0.80	2	03/21/07	03/21/07	PWG0700476	
Bromodichloromethane	ND U	2.0	0.80	2	03/21/07	03/21/07	PWG0700476	
Bromoform	ND U	2.0	0.82	2	03/21/07	03/21/07	PWG0700476	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

## Volatile Organic Compounds

**Sample Name:** CPT-35-75      **Units:** ug/L  
**Lab Code:** P0700256-004      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	2.0	1.3	2	03/21/07	03/21/07	PWG0700476	
Carbon Disulfide	ND U	4.0	1.7	2	03/21/07	03/21/07	PWG0700476	
Carbon Tetrachloride	ND U	1.0	0.96	2	03/21/07	03/21/07	PWG0700476	
Chlorobenzene	ND U	1.0	0.72	2	03/21/07	03/21/07	PWG0700476	
Chloroethane	ND U	2.0	0.92	2	03/21/07	03/21/07	PWG0700476	
Chloroform	ND U	1.0	0.80	2	03/21/07	03/21/07	PWG0700476	
Chloromethane	ND U	2.0	0.80	2	03/21/07	03/21/07	PWG0700476	
cis-1,2-Dichloroethene	3.9 D	1.0	0.78	2	03/21/07	03/21/07	PWG0700476	
cis-1,3-Dichloropropene	ND U	1.0	0.68	2	03/21/07	03/21/07	PWG0700476	
Dibromochloromethane	ND U	2.0	0.66	2	03/21/07	03/21/07	PWG0700476	*
Dibromomethane	ND U	1.0	0.78	2	03/21/07	03/21/07	PWG0700476	
Dichlorodifluoromethane	ND U	2.0	0.96	2	03/21/07	03/21/07	PWG0700476	
Ethylbenzene	ND U	1.0	0.82	2	03/21/07	03/21/07	PWG0700476	
Hexachlorobutadiene	ND U	2.0	0.92	2	03/21/07	03/21/07	PWG0700476	
Isopropylbenzene	ND U	2.0	0.68	2	03/21/07	03/21/07	PWG0700476	
Total Xylenes	ND U	3.0	2.2	2	03/21/07	03/21/07	PWG0700476	
Methyl tert-Butyl Ether	ND U	4.0	1.5	2	03/21/07	03/21/07	PWG0700476	
Methylene Chloride	ND U	4.0	0.86	2	03/21/07	03/21/07	PWG0700476	
n-Butylbenzene	ND U	2.0	0.74	2	03/21/07	03/21/07	PWG0700476	
n-Propylbenzene	ND U	2.0	0.82	2	03/21/07	03/21/07	PWG0700476	
Naphthalene	ND U	2.0	0.72	2	03/21/07	03/21/07	PWG0700476	
sec-Butylbenzene	ND U	2.0	0.74	2	03/21/07	03/21/07	PWG0700476	
Styrene	ND U	1.0	0.74	2	03/21/07	03/21/07	PWG0700476	
tert-Butylbenzene	ND U	2.0	0.82	2	03/21/07	03/21/07	PWG0700476	
Tetrachloroethene (PCE)	140 D	1.0	0.76	2	03/21/07	03/21/07	PWG0700476	
Toluene	ND U	1.0	0.72	2	03/21/07	03/21/07	PWG0700476	
trans-1,2-Dichloroethene	ND U	1.0	0.86	2	03/21/07	03/21/07	PWG0700476	
trans-1,3-Dichloropropene	ND U	1.0	0.78	2	03/21/07	03/21/07	PWG0700476	
Trichloroethene (TCE)	100 D	1.0	0.76	2	03/21/07	03/21/07	PWG0700476	
Trichlorofluoromethane	4.3 D	2.0	1.2	2	03/21/07	03/21/07	PWG0700476	
Vinyl Acetate	ND U	20	1.8	2	03/21/07	03/21/07	PWG0700476	
Vinyl Chloride	ND U	1.0	0.86	2	03/21/07	03/21/07	PWG0700476	

\* See Case Narrative

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

## Volatile Organic Compounds

**Sample Name:** CPI-35-75      **Units:** ug/L  
**Lab Code:** P0700256-004      **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	113	73-129	03/21/07	Acceptable
Toluene-d8	109	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	101	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Collected: 03/12/2007  
 Date Received: 03/12/2007

## Volatile Organic Compounds

Sample Name: CPT-36-50 Units: ug/L  
 Lab Code: P0700256-005 Basis: NA  
 Extraction Method: EPA 5030B Level: Low  
 Analysis Method: 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/23/07	03/23/07	PWG0700497	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.46	1	03/23/07	03/23/07	PWG0700497	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/23/07	03/23/07	PWG0700497	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/23/07	03/23/07	PWG0700497	
1,1,2-Trichlorotrifluoroethane	ND U	2.0	1.0	1	03/23/07	03/23/07	PWG0700497	
1,1-Dichloroethane	8.9	0.50	0.35	1	03/23/07	03/23/07	PWG0700497	
1,1-Dichloroethene	73	0.50	0.45	1	03/23/07	03/23/07	PWG0700497	
1,1-Dichloropropene	ND U	0.50	0.46	1	03/23/07	03/23/07	PWG0700497	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/23/07	03/23/07	PWG0700497	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/23/07	03/23/07	PWG0700497	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/23/07	03/23/07	PWG0700497	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/23/07	03/23/07	PWG0700497	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.76	1	03/23/07	03/23/07	PWG0700497	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/23/07	03/23/07	PWG0700497	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/23/07	03/23/07	PWG0700497	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/23/07	03/23/07	PWG0700497	
1,2-Dichloropropane	ND U	0.50	0.40	1	03/23/07	03/23/07	PWG0700497	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/23/07	03/23/07	PWG0700497	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/23/07	03/23/07	PWG0700497	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/23/07	03/23/07	PWG0700497	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/23/07	03/23/07	PWG0700497	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/23/07	03/23/07	PWG0700497	
2-Butanone (MEK)	ND U	10	1.7	1	03/23/07	03/23/07	PWG0700497	
2-Chlorotoluene	ND U	1.0	0.40	1	03/23/07	03/23/07	PWG0700497	
2-Hexanone	ND U	10	1.7	1	03/23/07	03/23/07	PWG0700497	
4-Chlorotoluene	ND U	1.0	0.38	1	03/23/07	03/23/07	PWG0700497	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/23/07	03/23/07	PWG0700497	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/23/07	03/23/07	PWG0700497	
Acetone	7.4 J	10	2.2	1	03/23/07	03/23/07	PWG0700497	
Benzene	ND U	0.50	0.42	1	03/23/07	03/23/07	PWG0700497	
Bromobenzene	ND U	1.0	0.40	1	03/23/07	03/23/07	PWG0700497	
Bromochloromethane	ND U	0.50	0.40	1	03/23/07	03/23/07	PWG0700497	
Bromodichloromethane	ND U	1.0	0.40	1	03/23/07	03/23/07	PWG0700497	
Bromoform	ND U	1.0	0.41	1	03/23/07	03/23/07	PWG0700497	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

## Volatile Organic Compounds

**Sample Name:** CPT-36-50      **Units:** ug/L  
**Lab Code:** P0700256-005      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/23/07	03/23/07	PWG0700497	
Carbon Disulfide	ND U	2.0	0.83	1	03/23/07	03/23/07	PWG0700497	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/23/07	03/23/07	PWG0700497	
Chlorobenzene	ND U	0.50	0.36	1	03/23/07	03/23/07	PWG0700497	
Chloroethane	ND U	1.0	0.46	1	03/23/07	03/23/07	PWG0700497	
Chloroform	1.8	0.50	0.40	1	03/23/07	03/23/07	PWG0700497	
Chloromethane	ND U	1.0	0.40	1	03/23/07	03/23/07	PWG0700497	
cis-1,2-Dichloroethene	18	0.50	0.39	1	03/23/07	03/23/07	PWG0700497	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/23/07	03/23/07	PWG0700497	
Dibromochloromethane	ND U	1.0	0.33	1	03/23/07	03/23/07	PWG0700497	
Dibromomethane	ND U	0.50	0.39	1	03/23/07	03/23/07	PWG0700497	
Difluorodifluoromethane	ND U	1.0	0.48	1	03/23/07	03/23/07	PWG0700497	
Ethene	ND U	0.50	0.41	1	03/23/07	03/23/07	PWG0700497	
Hexachlorobutadiene	ND U	1.0	0.46	1	03/23/07	03/23/07	PWG0700497	
Isopropylbenzene	ND U	1.0	0.34	1	03/23/07	03/23/07	PWG0700497	
Total Xylenes	ND U	1.5	1.1	1	03/23/07	03/23/07	PWG0700497	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/23/07	03/23/07	PWG0700497	
Methylene Chloride	ND U	2.0	0.43	1	03/23/07	03/23/07	PWG0700497	
n-Butylbenzene	ND U	1.0	0.37	1	03/23/07	03/23/07	PWG0700497	
n-Propylbenzene	ND U	1.0	0.41	1	03/23/07	03/23/07	PWG0700497	
Naphthalene	ND U	1.0	0.36	1	03/23/07	03/23/07	PWG0700497	
sec-Butylbenzene	ND U	1.0	0.37	1	03/23/07	03/23/07	PWG0700497	
Styrene	ND U	0.50	0.37	1	03/23/07	03/23/07	PWG0700497	
tert-Butylbenzene	ND U	1.0	0.41	1	03/23/07	03/23/07	PWG0700497	
Tetrachloroethene (PCE)	60	0.50	0.38	1	03/23/07	03/23/07	PWG0700497	
Toluene	ND U	0.50	0.36	1	03/23/07	03/23/07	PWG0700497	
trans-1,2-Dichloroethene	0.50	0.50	0.43	1	03/23/07	03/23/07	PWG0700497	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/23/07	03/23/07	PWG0700497	
Trichloroethene (TCE)	15	0.50	0.38	1	03/23/07	03/23/07	PWG0700497	
Trichlorofluoromethane	0.66 JC	1.0	0.60	1	03/23/07	03/23/07	PWG0700497	*
Vinyl Acetate	ND U	10	0.90	1	03/23/07	03/23/07	PWG0700497	
Vinyl Chloride	ND U	0.50	0.43	1	03/23/07	03/23/07	PWG0700497	

\* See Case Narrative

Comments: \_\_\_\_\_

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

**Volatile Organic Compounds**

**Sample Name:** CPT-36-50                                   **Units:** ug/L  
**Lab Code:** P0700256-005                                   **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	126	73-129	03/23/07	Acceptable
Toluene-d8	121	76-122	03/23/07	Acceptable
4-Bromofluorobenzene	115	63-118	03/23/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

## Volatile Organic Compounds

**Sample Name:** CPI-36-61      **Units:** ug/L  
**Lab Code:** P0700256-006      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	*
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichloroethane	ND	U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichlorotrifluoroethane	2.6		2.0	1.0	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethane	17		0.50	0.35	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethene	23		0.50	0.45	1	03/21/07	03/21/07	PWG0700476	*
1,1-Dichloropropene	ND	U	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichlorobenzene	ND	U	1.0	0.39	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichloropropane	ND	U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trichlorobenzene	ND	U	1.0	0.45	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trimethylbenzene	ND	U	1.0	0.36	1	03/21/07	03/21/07	PWG0700476	
1-Bromo-3-chloropropane	ND	U	2.0	0.76	1	03/21/07	03/21/07	PWG0700476	
1,1-Dibromoethane (EDB)	ND	U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichlorobenzene	ND	U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloropropane	ND	U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3,5-Trimethylbenzene	ND	U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichlorobenzene	ND	U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichloropropane	ND	U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,4-Dichlorobenzene	ND	U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
2,2-Dichloropropane	ND	U	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
2-Butanone (MEK)	ND	U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
2-Chlorotoluene	ND	U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
2-Hexanone	ND	U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
4-Chlorotoluene	ND	U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
4-Isopropyltoluene	ND	U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
4-Methyl-2-pentanone (MIBK)	ND	U	10	1.5	1	03/21/07	03/21/07	PWG0700476	
Acetone	3.0	J	10	2.2	1	03/21/07	03/21/07	PWG0700476	
Benzene	ND	U	0.50	0.42	1	03/21/07	03/21/07	PWG0700476	
Bromobenzene	ND	U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromochloromethane	ND	U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromodichloromethane	0.65	J	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromoform	ND	U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Collected: 03/12/2007  
 Date Received: 03/12/2007

## Volatile Organic Compounds

Sample Name: CPT-36-61 Units: ug/l  
 Lab Code: P0700256-006 Basis: NA  
 Extraction Method: EPA 5030B Level: Low  
 Analysis Method: 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700476	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700476	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700476	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
Chloroform	4.4	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
cis-1,2-Dichloroethene	34	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/21/07	03/21/07	PWG0700476	
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700476	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
Dichlorodifluoromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700476	
Ethylbenzene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
Hexachlorobutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700476	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700476	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700476	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
Naphthalene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700476	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
Tetrachloroethene (PCE)	38	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
trans-1,2-Dichloroethene	0.68	0.50	0.43	1	03/21/07	03/21/07	PWG0700476	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
Trichloroethene (TCE)	14	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
Trichlorofluoromethane	0.72 J	1.0	0.60	1	03/21/07	03/21/07	PWG0700476	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700476	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700476	

\* See Case Narrative

Comments: \_\_\_\_\_

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/12/2007  
**Date Received:** 03/12/2007

**Volatile Organic Compounds**

**Sample Name:** CPT-36-61      **Units:** ug/L  
**Lab Code:** P0700256-006      **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	113	73-129	03/21/07	Acceptable
Toluene-d8	107	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	103	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Collected: 03/13/2007  
 Date Received: 03/13/2007

## Volatile Organic Compounds

Sample Name: IB-1 Units: ug/L  
 Lab Code: P0700256-007 Basis: NA  
 Extraction Method: EPA 5030B Level: Low  
 Analysis Method: 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	*
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichlorotrifluoroethane	ND U	2.0	1.0	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethane	ND U	0.50	0.35	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethylene	ND U	0.50	0.45	1	03/21/07	03/21/07	PWG0700476	*
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700476	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700476	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloropropane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700476	
Acetone	ND U	10	2.2	1	03/21/07	03/21/07	PWG0700476	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700476	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromodichloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	*

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** TB-1      **Units:** ug/L  
**Lab Code:** P0700256-007      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND	U	1.0	0.61	1	03/21/07	03/21/07	PWG0700476	
Carbon Disulfide	ND	U	2.0	0.83	1	03/21/07	03/21/07	PWG0700476	
Carbon Tetrachloride	ND	U	0.50	0.48	1	03/21/07	03/21/07	PWG0700476	
Chlorobenzene	ND	U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
Chloroethane	ND	U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
Chloroform	ND	U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
Chloromethane	ND	U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
cis-1,2-Dichloroethene	ND	U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
cis-1,3-Dichloropropene	ND	U	0.50	0.34	1	03/21/07	03/21/07	PWG0700476	
Dibromochloromethane	ND	U	1.0	0.33	1	03/21/07	03/21/07	PWG0700476	*
Dibromomethane	ND	U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
Difluorodifluoromethane	ND	U	1.0	0.48	1	03/21/07	03/21/07	PWG0700476	
1,1-Benzene	ND	U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
Hexachlorobutadiene	ND	U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
Isopropylbenzene	ND	U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
Total Xylenes	ND	U	1.5	1.1	1	03/21/07	03/21/07	PWG0700476	
Methyl tert-Butyl Ether	ND	U	2.0	0.71	1	03/21/07	03/21/07	PWG0700476	
Methylene Chloride	ND	U	2.0	0.43	1	03/21/07	03/21/07	PWG0700476	
n-Butylbenzene	ND	U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
n-Propylbenzene	ND	U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
Naphthalene	ND	U	1.0	0.36	1	03/21/07	03/21/07	PWG0700476	
sec-Butylbenzene	ND	U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
Styrene	ND	U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
tert-Butylbenzene	ND	U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
Tetrachloroethene (PCE)	ND	U	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
Toluene	ND	U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
trans-1,2-Dichloroethene	ND	U	0.50	0.43	1	03/21/07	03/21/07	PWG0700476	
trans-1,3-Dichloropropene	ND	U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
Trichloroethene (TCE)	ND	U	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
Trichlorofluoromethane	ND	U	1.0	0.60	1	03/21/07	03/21/07	PWG0700476	
Vinyl Acetate	ND	U	10	0.90	1	03/21/07	03/21/07	PWG0700476	
Vinyl Chloride	ND	U	0.50	0.43	1	03/21/07	03/21/07	PWG0700476	

\* See Case Narrative

Comments: \_\_\_\_\_

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

**Volatile Organic Compounds**

**Sample Name:** TB-1                                           **Units:** ug/L  
**Lab Code:** P0700256-007                                   **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	111	73-129	03/21/07	Acceptable
Toluene-d8	108	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	99	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

<b>Sample Name:</b>	CPT-37-54	<b>Units:</b>	ug/L
<b>Lab Code:</b>	P0700256-008	<b>Basis:</b>	NA
<b>Extraction Method:</b>	EPA 5030B	<b>Level:</b>	Low
<b>Analysis Method:</b>	8260B		

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	ND U	2.0	1.0	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	ND U	0.50	0.35	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethene	ND U	0.50	0.45	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700478	
1,3,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
1-bromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700478	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700478	
Acetone	ND U	10	2.2	1	03/21/07	03/21/07	PWG0700478	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	0.52 J	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPT-37-54      **Units:** ug/L  
**Lab Code:** P0700256-008      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
<b>Chloroform</b>	<b>3.0</b>	<b>0.50</b>	<b>0.40</b>	<b>1</b>	<b>03/21/07</b>	<b>03/21/07</b>	<b>PWG0700478</b>	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
cis-1,2-Dichloroethene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Dichlorodifluoromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700478	*
Ethylbenzene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
Hexachlorobutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Tetrachloroethene (PCE)	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Trichloroethene (TCE)	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	ND U	1.0	0.60	1	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

**Volatile Organic Compounds**

**Sample Name:** CPT-37-54                   **Units:** ug/L  
**Lab Code:** P0700256-008                   **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	123	73-129	03/21/07	Acceptable
Toluene-d8	115	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	110	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPT-37-70      **Units:** ug/L  
**Lab Code:** P0700256-009      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	1.1 J	2.0	1.0	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	6.0	0.50	0.35	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethene	6.1	0.50	0.45	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700478	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700478	
Acetone	ND U	10	2.2	1	03/21/07	03/21/07	PWG0700478	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	0.41 J	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPT-37-70      **Units:** ug/L  
**Lab Code:** P0700256-009      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Chloroform	2.6	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
cis-1,2-Dichloroethene	13	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Difluorodifluoromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700478	*
Ethene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
Hexachlorobutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Tetrachloroethene (PCE)	10	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	0.50	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Trichloroethene (TCE)	5.3	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	ND U	1.0	0.60	1	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

### Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## **Volatile Organic Compounds**

**Sample Name:** CPI-37-70      **Units:** ug/L  
**Lab Code:** P0700256-009      **Basis:** NA

Surrogate Name	% Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	112	73-129	03/21/07	Acceptable
Toluene-d8	103	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	99	63-118	03/21/07	Acceptable

### Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPT-38-52      **Units:** ug/L  
**Lab Code:** P0700256-010      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	ND U	2.0	1.0	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	0.48 J	0.50	0.35	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethene	6.7	0.50	0.45	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
1-Bromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700478	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700478	
Acetone	7.0 J	10	2.2	1	03/21/07	03/21/07	PWG0700478	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPT-38-52      **Units:** ug/L  
**Lab Code:** P0700256-010      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Chloroform	1.6	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
cis-1,2-Dichloroethene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Dichlorodifluoromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700478	*
Ethylbenzene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
Hexachlorobutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Tetrachloroethene (PCE)	0.91	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Trichloroethene (TCE)	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	ND U	1.0	0.60	1	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments: \_\_\_\_\_

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COLUMBIA ANALYTICAL SERVICES, INC.

### Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPI-38-52      **Units:** ug/L  
**Lab Code:** P0700256-010      **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	113	73-129	03/21/07	Acceptable
Toluene-d8	110	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	104	63-118	03/21/07	Acceptable

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPT-38-62      **Units:** ug/L  
**Lab Code:** P0700256-011      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	*
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichlorotrifluoroethane	ND U	2.0	1.0	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethane	ND U	0.50	0.35	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethene	0.90	0.50	0.45	1	03/21/07	03/21/07	PWG0700476	*
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700476	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700476	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloropropene	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700476	
Acetone	ND U	10	2.2	1	03/21/07	03/21/07	PWG0700476	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700476	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromodichloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	*

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Collected: 03/13/2007  
 Date Received: 03/13/2007

## Volatile Organic Compounds

Sample Name: CPT-38-62 Units: ug/L  
 Lab Code: P0700256-011 Basis: NA  
 Extraction Method: EPA 5030B Level: Low  
 Analysis Method: 8260B

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND	U	1.0	0.61	1	03/21/07	03/21/07	PWG0700476	
Carbon Disulfide	ND	U	2.0	0.83	1	03/21/07	03/21/07	PWG0700476	
Carbon Tetrachloride	ND	U	0.50	0.48	1	03/21/07	03/21/07	PWG0700476	
Chlorobenzene	ND	U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
Chloroethane	ND	U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
Chloroform	2.4		0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
Chloromethane	ND	U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
cis-1,2-Dichloroethene	0.39	J	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
cis-1,3-Dichloropropene	ND	U	0.50	0.34	1	03/21/07	03/21/07	PWG0700476	
Dibromochloromethane	ND	U	1.0	0.33	1	03/21/07	03/21/07	PWG0700476	*
Dibromomethane	ND	U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
Dichlorodifluoromethane	ND	U	1.0	0.48	1	03/21/07	03/21/07	PWG0700476	
Ethene	ND	U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
trans-1,3-Chlorobutadiene	ND	U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
Isopropylbenzene	ND	U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
Total Xylenes	ND	U	1.5	1.1	1	03/21/07	03/21/07	PWG0700476	
Methyl tert-Butyl Ether	ND	U	2.0	0.71	1	03/21/07	03/21/07	PWG0700476	
Methylene Chloride	ND	U	2.0	0.43	1	03/21/07	03/21/07	PWG0700476	
n-Butylbenzene	ND	U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
n-Propylbenzene	ND	U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
Naphthalene	ND	U	1.0	0.36	1	03/21/07	03/21/07	PWG0700476	
sec-Butylbenzene	ND	U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
Styrene	ND	U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
tert-Butylbenzene	ND	U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
Tetrachloroethene (PCE)	6.5		0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
Toluene	ND	U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
trans-1,2-Dichloroethene	ND	U	0.50	0.43	1	03/21/07	03/21/07	PWG0700476	
trans-1,3-Dichloropropene	ND	U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
Trichloroethene (TCE)	1.4		0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
Trichlorofluoromethane	ND	U	1.0	0.60	1	03/21/07	03/21/07	PWG0700476	
Vinyl Acetate	ND	U	10	0.90	1	03/21/07	03/21/07	PWG0700476	
Vinyl Chloride	ND	U	0.50	0.43	1	03/21/07	03/21/07	PWG0700476	

\* See Case Narrative

Comments: \_\_\_\_\_

COLUMBIA ANALYTICAL SERVICES, INC.

### Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPT-38-62      **Units:** ug/L  
**Lab Code:** P0700256-011      **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	113	73-129	03/21/07	Acceptable
Toluene-d8	105	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	101	63-118	03/21/07	Acceptable

#### Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPT-34-54      **Units:** ug/L  
**Lab Code:** P0700256-012      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (ICA)	0.54	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	ND U	2.0	1.0	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	6.8	0.50	0.35	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethene	61	0.50	0.45	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
1-Bromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700478	
1,1-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700478	
Acetone	ND U	10	2.2	1	03/21/07	03/21/07	PWG0700478	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPT-34-54      **Units:** ug/L  
**Lab Code:** P0700256-012      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Chloroform	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
cis-1,2-Dichloroethene	19	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Dichlorodifluoromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700478	*
Ethylbenzene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
Hexachlorobutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Tetrachloroethene (PCE)	70	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Trichloroethene (TCE)	17	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	0.64 J	1.0	0.60	1	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

**Volatile Organic Compounds**

**Sample Name:** CPT-34-54                   **Units:** ug/L  
**Lab Code:** P0700256-012                   **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	110	73-129	03/21/07	Acceptable
Toluene-d8	107	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	100	63-118	03/21/07	Acceptable

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Collected: 03/13/2007  
 Date Received: 03/13/2007

## Volatile Organic Compounds

Sample Name: CPT-34-62 Units: ug/L  
 Lab Code: P0700256-013 Basis: NA  
 Extraction Method: EPA 5030B Level: Low  
 Analysis Method: 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (TCA)	0.55	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	3.4	2.0	1.0	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	17	0.50	0.35	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethene	27	0.50	0.45	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700478	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropene	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700478	
Acetone	4.1 J	10	2.2	1	03/21/07	03/21/07	PWG0700478	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPT-34-62      **Units:** ug/L  
**Lab Code:** P0700256-013      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Chloroform	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
cis-1,2-Dichloroethene	38	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Difluorodifluoromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700478	*
Ethylbenzene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
Hexachlorobutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Tetrachloroethene (PCE)	66	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Trichloroethene (TCE)	18	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	0.72 I	1.0	0.60	1	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPT-34-62      **Units:** ug/L  
**Lab Code:** P0700256-013      **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	118	73-129	03/21/07	Acceptable
Toluene-d8	110	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	108	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPT-34-73      **Units:** ug/L  
**Lab Code:** P0700256-014      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (ICA)	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	1.4 J	2.0	1.0	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	0.91	0.50	0.35	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethene	3.6	0.50	0.45	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
bromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700478	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	3.6 J	10	1.7	1	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700478	
Acetone	18	10	2.2	1	03/21/07	03/21/07	PWG0700478	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	*

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPI-34-73      **Units:** ug/L  
**Lab Code:** P0700256-014      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
<b>Chloroform</b>	<b>0.61</b>	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
<b>cis-1,2-Dichloroethene</b>	<b>5.1</b>	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
<b>cis-1,3-Dichloropropene</b>	<b>ND U</b>	<b>0.50</b>	<b>0.34</b>	<b>1</b>	<b>03/21/07</b>	<b>03/21/07</b>	<b>PWG0700478</b>	*
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Dichlorodifluoromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700478	*
Ethylbenzene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
Hexachlorobutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
<b>Naphthalene</b>	<b>0.42 J</b>	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
<b>Tetrachloroethene (PCE)</b>	<b>56</b>	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
<b>Trichloroethene (TCE)</b>	<b>17</b>	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	ND U	1.0	0.60	1	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/13/2007  
**Date Received:** 03/13/2007

## Volatile Organic Compounds

**Sample Name:** CPT-34-73      **Units:** ug/L  
**Lab Code:** P0700256-014      **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	119	73-129	03/21/07	Acceptable
Toluene-d8	113	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	110	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

## Volatile Organic Compounds

**Sample Name:** IB-1 **Units:** ug/L  
**Lab Code:** P0700256-015 **Basis:** NA  
**Extraction Method:** EPA 5030B **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	ND U	2.0	1.0	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	ND U	0.50	0.35	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethene	ND U	0.50	0.45	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700478	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700478	
Acetone	ND U	10	2.2	1	03/21/07	03/21/07	PWG0700478	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Collected: 03/14/2007  
 Date Received: 03/14/2007

## Volatile Organic Compounds

Sample Name: IB-1 Units: ug/L  
 Lab Code: P0700256-015 Basis: NA  
 Extraction Method: EPA 5030B Level: Low  
 Analysis Method: 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Chloroform	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
cis-1,2-Dichloroethene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
1,1-Difluorodichloromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700478	*
o-xylene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
Hexachlorobutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Tetrachloroethene (PCE)	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Trichloroethene (TCE)	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	ND U	1.0	0.60	1	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments: \_\_\_\_\_

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

**Volatile Organic Compounds**

**Sample Name:** IB-1                                   **Units:** ug/L  
**Lab Code:** P0700256-015                           **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	111	73-129	03/21/07	Acceptable
Toluene-d8	109	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	102	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

## Volatile Organic Compounds

**Sample Name:** CPT-33-54      **Units:** ug/L  
**Lab Code:** P0700256-016      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (TCA)	4.2 D	2.5	2.3	5	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	ND U	10	5.0	5	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	36 D	2.5	1.8	5	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethene	200 D	2.5	2.3	5	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	2.5	2.3	5	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	2.5	2.1	5	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	5.0	2.3	5	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND U	5.0	1.8	5	03/21/07	03/21/07	PWG0700478	
1-bromo-3-chloropropane	ND U	10	3.8	5	03/21/07	03/21/07	PWG0700478	
1,1-dibromoethane (EDB)	ND U	5.0	1.9	5	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	2.5	1.8	5	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	ND U	2.5	1.7	5	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropane	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	2.5	1.7	5	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	2.5	2.1	5	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND U	5.0	8.5	5	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	5.0	8.5	5	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	5.0	1.9	5	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	5.0	1.7	5	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	5.0	7.5	5	03/21/07	03/21/07	PWG0700478	
Acetone	13 JD	50	11	5	03/21/07	03/21/07	PWG0700478	
Benzene	ND U	2.5	2.1	5	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	5.0	2.1	5	03/21/07	03/21/07	PWG0700478	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Collected: 03/14/2007  
 Date Received: 03/14/2007

## Volatile Organic Compounds

Sample Name:	CPI-33-54	Units:	ug/L
Lab Code:	P0700256-016	Basis:	NA
Extraction Method:	EPA 5030B	Level:	Low
Analysis Method:	8260B		

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	5.0	3.1	5	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	10	4.2	5	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	2.5	2.4	5	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	2.5	1.8	5	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	5.0	2.3	5	03/21/07	03/21/07	PWG0700478	
Chloroform	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
cis-1,2-Dichloroethene	130 D	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND U	2.5	1.7	5	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND U	5.0	1.7	5	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
Dichlorodifluoromethane	ND U	5.0	2.4	5	03/21/07	03/21/07	PWG0700478	*
Ethylbenzene	ND U	2.5	2.1	5	03/21/07	03/21/07	PWG0700478	
Hexachlorobutadiene	ND U	5.0	2.3	5	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	5.0	1.7	5	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	7.5	5.6	5	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	10	3.6	5	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	10	2.2	5	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	5.0	1.9	5	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	5.0	2.1	5	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND U	5.0	1.8	5	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	5.0	1.9	5	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	5.0	2.1	5	03/21/07	03/21/07	PWG0700478	
Tetrachloroethene (PCE)	280 D	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	2.5	1.8	5	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	ND U	2.5	2.2	5	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
Trichloroethene (TCE)	76 D	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	ND U	5.0	3.0	5	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	50	4.5	5	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	ND U	2.5	2.2	5	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments: \_\_\_\_\_

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## **COLUMBIA ANALYTICAL SERVICES, INC.**

### Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

### Volatile Organic Compounds

**Sample Name:** CPT-33-54      **Units:** ug/L  
**Lab Code:** P0700256-016      **Basis:** NA

Surrogate Name	% Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	111	73-129	03/21/07	Acceptable
Toluene-d8	108	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	102	63-118	03/21/07	Acceptable

### Cents:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Collected: 03/14/2007  
 Date Received: 03/14/2007

## Volatile Organic Compounds

Sample Name: CPT-33-64 Units: ug/L  
 Lab Code: P0700256-017 Basis: NA  
 Extraction Method: EPA 5030B Level: Low  
 Analysis Method: 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (ICA)	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	4.9	2.0	1.0	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	0.68	0.50	0.35	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethylene	4.5	0.50	0.45	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700478	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropene	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700478	
Acetone	ND U	10	2.2	1	03/21/07	03/21/07	PWG0700478	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	*

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

## Volatile Organic Compounds

**Sample Name:** CPI-33-64      **Units:** ug/L  
**Lab Code:** P0700256-017      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Chloroform	0.56	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
cis-1,2-Dichloroethene	4.5	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Dichlorodifluoromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700478	*
1,1-Diphenylbenzene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
Hexachlorobutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Tetrachloroethene (PCE)	84	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Trichloroethene (TCE)	38	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	1.4	1.0	0.60	1	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

**Volatile Organic Compounds**

**Sample Name:** CPT-33-64                                           **Units:** ug/L  
**Lab Code:** P0700256-017                                           **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	120	73-129	03/21/07	Acceptable
Toluene-d8	115	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	109	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Collected: 03/14/2007  
 Date Received: 03/15/2007

## Volatile Organic Compounds

Sample Name: CPT-32-54 Units: ug/L  
 Lab Code: P0700256-018 Basis: NA  
 Extraction Method: EPA 5030B Level: Low  
 Analysis Method: 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	5.0	3.7	10	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (ICA)	25 D	5.0	4.6	10	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	5.0	3.7	10	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	5.0	4.0	10	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	ND U	20	10	10	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	130 D	5.0	3.5	10	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethene	660 D	5.0	4.5	10	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	5.0	4.6	10	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	10	3.9	10	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	5.0	4.1	10	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	10	4.5	10	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND U	10	3.6	10	03/21/07	03/21/07	PWG0700478	
1-bromo-3-chloropropane	ND U	20	7.6	10	03/21/07	03/21/07	PWG0700478	
1,1-dibromoethane (EDB)	ND U	10	3.8	10	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	5.0	3.6	10	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	ND U	5.0	3.3	10	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropane	ND U	5.0	4.0	10	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	10	4.0	10	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	5.0	3.3	10	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	5.0	4.1	10	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	5.0	3.7	10	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	5.0	3.8	10	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND U	100	17	10	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	10	4.0	10	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	100	17	10	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	10	3.8	10	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	10	3.4	10	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	100	15	10	03/21/07	03/21/07	PWG0700478	
Acetone	ND U	100	22	10	03/21/07	03/21/07	PWG0700478	
Benzene	ND U	5.0	4.2	10	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	10	4.0	10	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND U	5.0	4.0	10	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	ND U	10	4.0	10	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	10	4.1	10	03/21/07	03/21/07	PWG0700478	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Collected: 03/14/2007  
 Date Received: 03/15/2007

## Volatile Organic Compounds

Sample Name: CPI-32-54 Units: ug/L  
 Lab Code: P0700256-018 Basis: NA  
 Extraction Method: EPA 5030B Level: Low  
 Analysis Method: 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	10	6.1	10	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	20	8.3	10	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	5.0	4.8	10	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	5.0	3.6	10	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	10	4.6	10	03/21/07	03/21/07	PWG0700478	
Chloroform	ND U	5.0	4.0	10	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND U	10	4.0	10	03/21/07	03/21/07	PWG0700478	
cis-1,2-Dichloroethene	560 D	5.0	3.9	10	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND U	5.0	3.4	10	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND U	10	3.3	10	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	5.0	3.9	10	03/21/07	03/21/07	PWG0700478	
Dichlorodifluoromethane	ND U	10	4.8	10	03/21/07	03/21/07	PWG0700478	*
Ethylbenzene	ND U	5.0	4.1	10	03/21/07	03/21/07	PWG0700478	
Hexachlorobutadiene	ND U	10	4.6	10	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	10	3.4	10	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	15	11	10	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	20	7.1	10	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	20	4.3	10	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	10	3.7	10	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	10	4.1	10	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND U	10	3.6	10	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	10	3.7	10	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	5.0	3.7	10	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	10	4.1	10	03/21/07	03/21/07	PWG0700478	
Tetrachloroethene (PCE)	690 D	5.0	3.8	10	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	5.0	3.6	10	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	4.3 JD	5.0	4.3	10	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	5.0	3.9	10	03/21/07	03/21/07	PWG0700478	
Trichloroethene (TCE)	150 D	5.0	3.8	10	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	17 D	10	6.0	10	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	100	9.0	10	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	ND U	5.0	4.3	10	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/15/2007

## Volatile Organic Compounds

**Sample Name:** CPT-32-54                    **Units:** ug/L  
**Lab Code:** P0700256-018                    **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	111	73-129	03/21/07	Acceptable
Toluene-d8	106	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	100	63-118	03/21/07	Acceptable

C      Units: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

## Volatile Organic Compounds

**Sample Name:** CPT-32-66      **Units:** ug/L  
**Lab Code:** P0700256-019      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (ICA)	26 D	2.5	2.3	5	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	17 D	10	5.0	5	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	99 D	2.5	1.8	5	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethene	200 D	2.5	2.3	5	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	2.5	2.3	5	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	2.5	2.1	5	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	5.0	2.3	5	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND U	5.0	1.8	5	03/21/07	03/21/07	PWG0700478	
1,2-Dibromo-3-chloropropane	ND U	10	3.8	5	03/21/07	03/21/07	PWG0700478	
1,2-Dibromoethane (EDB)	ND U	5.0	1.9	5	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	2.5	1.8	5	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	3.8 D	2.5	1.7	5	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropane	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	2.5	1.7	5	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	2.5	2.1	5	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND U	50	8.5	5	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	50	8.5	5	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	5.0	1.9	5	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	5.0	1.7	5	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	50	7.5	5	03/21/07	03/21/07	PWG0700478	
Acetone	ND U	50	11	5	03/21/07	03/21/07	PWG0700478	
Benzene	ND U	2.5	2.1	5	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	5.0	2.1	5	03/21/07	03/21/07	PWG0700478	*

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

## Volatile Organic Compounds

**Sample Name:** CPI-32-66      **Units:** ug/L  
**Lab Code:** P0700256-019      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	5.0	3.1	5	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	10	4.2	5	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	2.5	2.4	5	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	2.5	1.8	5	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	5.0	2.3	5	03/21/07	03/21/07	PWG0700478	
Chloroform	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
cis-1,2-Dichloroethene	280 D	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND U	2.5	1.7	5	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND U	5.0	1.7	5	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
Dichlorodifluoromethane	ND U	5.0	2.4	5	03/21/07	03/21/07	PWG0700478	*
Fluorobenzene	ND U	2.5	2.1	5	03/21/07	03/21/07	PWG0700478	
Heptachlorobutadiene	ND U	5.0	2.3	5	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	5.0	1.7	5	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	7.5	5.6	5	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	10	3.6	5	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	10	2.2	5	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	5.0	1.9	5	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	5.0	2.1	5	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND U	5.0	1.8	5	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	5.0	1.9	5	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	5.0	2.1	5	03/21/07	03/21/07	PWG0700478	
Tetrachloroethene (PCE)	230 D	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	2.5	1.8	5	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	3.5 D	2.5	2.2	5	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
Trichloroethene (TCE)	69 D	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	3.2 JD	5.0	3.0	5	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	50	4.5	5	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	15 D	2.5	2.2	5	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

## Volatile Organic Compounds

**Sample Name:** CPI-32-66      **Units:** ug/L  
**Lab Code:** P0700256-019      **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	109	73-129	03/21/07	Acceptable
Toluene-d8	106	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	100	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

## Volatile Organic Compounds

**Sample Name:** CPT-31-55      **Units:** ug/L  
**Lab Code:** P0700256-020      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	5.0	3.7	10	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (TCA)	95	D	5.0	4.6	10	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND	U	5.0	3.7	10	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND	U	5.0	4.0	10	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	ND	U	20	10	10	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	200	D	5.0	3.5	10	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethene	610	D	5.0	4.5	10	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND	U	5.0	4.6	10	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND	U	10	3.9	10	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND	U	5.0	4.1	10	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND	U	10	4.5	10	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND	U	10	3.6	10	03/21/07	03/21/07	PWG0700478	
1-Bromo-3-chloropropane	ND	U	20	7.6	10	03/21/07	03/21/07	PWG0700478	
1,1-Dibromoethane (EDB)	ND	U	10	3.8	10	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND	U	5.0	3.6	10	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	16	D	5.0	3.3	10	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropane	ND	U	5.0	4.0	10	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND	U	10	4.0	10	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND	U	5.0	3.3	10	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND	U	5.0	4.1	10	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND	U	5.0	3.7	10	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND	U	5.0	3.8	10	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND	U	100	17	10	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND	U	10	4.0	10	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND	U	100	17	10	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND	U	10	3.8	10	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND	U	10	3.4	10	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND	U	100	15	10	03/21/07	03/21/07	PWG0700478	
Acetone	ND	U	100	22	10	03/21/07	03/21/07	PWG0700478	
Benzene	ND	U	5.0	4.2	10	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND	U	10	4.0	10	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND	U	5.0	4.0	10	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	ND	U	10	4.0	10	03/21/07	03/21/07	PWG0700478	
Bromoform	ND	U	10	4.1	10	03/21/07	03/21/07	PWG0700478	*

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

### Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HAO620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

## Volatile Organic Compounds

**Sample Name:** CPT-31-55      **Units:** ug/L  
**Lab Code:** P0700256-020      **Basis:** NA

**Extraction Method:** EPA 5030B      **Analysis Method:** 8260B      **Level:** Low

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND	U	10	6.1	10	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND	U	20	8.3	10	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND	U	5.0	4.8	10	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND	U	5.0	3.6	10	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND	U	10	4.6	10	03/21/07	03/21/07	PWG0700478	
<b>Chloroform</b>	<b>740</b>	D	5.0	4.0	10	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND	U	10	4.0	10	03/21/07	03/21/07	PWG0700478	
<b>cis-1,2-Dichloroethene</b>	<b>200</b>	D	5.0	3.9	10	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND	U	5.0	3.4	10	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND	U	10	3.3	10	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND	U	5.0	3.9	10	03/21/07	03/21/07	PWG0700478	
Dichlorodifluoromethane	ND	U	10	4.8	10	03/21/07	03/21/07	PWG0700478	*
Ethylbenzene	ND	U	5.0	4.1	10	03/21/07	03/21/07	PWG0700478	
Hexachlorobutadiene	ND	U	10	4.6	10	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND	U	10	3.4	10	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND	U	15	11	10	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND	U	20	7.1	10	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND	U	20	4.3	10	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND	U	10	3.7	10	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND	U	10	4.1	10	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND	U	10	3.6	10	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND	U	10	3.7	10	03/21/07	03/21/07	PWG0700478	
Styrene	ND	U	5.0	3.7	10	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND	U	10	4.1	10	03/21/07	03/21/07	PWG0700478	
<b>Tetrachloroethene (PCE)</b>	<b>600</b>	D	5.0	3.8	10	03/21/07	03/21/07	PWG0700478	
Toluene	ND	U	5.0	3.6	10	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	ND	U	5.0	4.3	10	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND	U	5.0	3.9	10	03/21/07	03/21/07	PWG0700478	
<b>Trichloroethene (TCE)</b>	<b>150</b>	D	5.0	3.8	10	03/21/07	03/21/07	PWG0700478	
<b>Trichlorofluoromethane</b>	<b>6.4</b>	JD	10	6.0	10	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND	U	100	9.0	10	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	ND	U	5.0	4.3	10	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative.

## Comments

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

## Volatile Organic Compounds

**Sample Name:** CPT-31-55      **Units:** ug/L  
**Lab Code:** P0700256-020      **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	114	73-129	03/21/07	Acceptable
Toluene-d8	107	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	98	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

## Volatile Organic Compounds

**Sample Name:** CPI-31-66      **Units:** ug/L  
**Lab Code:** P0700256-021      **Basis:** NA

**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (TCA)	290 D	2.5	2.3	5	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	15 D	10	5.0	5	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	330 D	2.5	1.8	5	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethylene	260 D	2.5	2.3	5	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	2.5	2.3	5	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	2.5	2.1	5	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	5.0	2.3	5	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND U	5.0	1.8	5	03/21/07	03/21/07	PWG0700478	
1,2-Dibromo-3-chloropropane	ND U	10	3.8	5	03/21/07	03/21/07	PWG0700478	
1,2-Dibromoethane (EDB)	ND U	5.0	1.9	5	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	2.5	1.8	5	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	27 D	2.5	1.7	5	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropane	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	2.5	1.7	5	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	2.5	2.1	5	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND U	50	8.5	5	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	50	8.5	5	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	5.0	1.9	5	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	5.0	1.7	5	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	50	7.5	5	03/21/07	03/21/07	PWG0700478	
Acetone	ND U	50	11	5	03/21/07	03/21/07	PWG0700478	
Benzene	2.5 JD	2.5	2.1	5	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	5.0	2.1	5	03/21/07	03/21/07	PWG0700478	*

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Collected: 03/14/2007  
 Date Received: 03/14/2007

## Volatile Organic Compounds

Sample Name: CPT-31-66 Units: ug/L  
 Lab Code: P0700256-021 Basis: NA  
 Extraction Method: EPA 5030B Level: Low  
 Analysis Method: 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Lot	Note
Bromomethane	ND U	5.0	3.1	5	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	10	4.2	5	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	2.5	2.4	5	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	2.5	1.8	5	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	5.0	2.3	5	03/21/07	03/21/07	PWG0700478	
Chloroform	6.1 D	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND U	5.0	2.0	5	03/21/07	03/21/07	PWG0700478	
cis-1,2-Dichloroethene	360 D	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND U	2.5	1.7	5	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND U	5.0	1.7	5	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
Dichlorodifluoromethane	ND U	5.0	2.4	5	03/21/07	03/21/07	PWG0700478	*
E <sup>t</sup> -benzene	ND U	2.5	2.1	5	03/21/07	03/21/07	PWG0700478	
I-chlorobutadiene	ND U	5.0	2.3	5	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	5.0	1.7	5	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	7.5	5.6	5	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	10	3.6	5	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	10	2.2	5	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	5.0	1.9	5	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	5.0	2.1	5	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND U	5.0	1.8	5	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	5.0	1.9	5	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	5.0	2.1	5	03/21/07	03/21/07	PWG0700478	
Tetrachloroethene (PCE)	220 D	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	2.5	1.8	5	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	7.3 D	2.5	2.2	5	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	2.5	2.0	5	03/21/07	03/21/07	PWG0700478	
Trichloroethene (TCE)	120 D	2.5	1.9	5	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	5.3 D	5.0	3.0	5	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	50	4.5	5	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	41 D	2.5	2.2	5	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

**Volatile Organic Compounds**

**Sample Name:** CPT-31-66                   **Units:** ug/L  
**Lab Code:** P0700256-021                   **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	115	73-129	03/21/07	Acceptable
Toluene-d8	108	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	100	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

## Volatile Organic Compounds

**Sample Name:** CPI-31-77      **Units:** ug/L  
**Lab Code:** P0700256-022      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	1.0	0.74	2	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (TCA)	5.7 D	1.0	0.92	2	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	1.0	0.74	2	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	1.0	0.80	2	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	48 D	4.0	2.0	2	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	4.5 D	1.0	0.70	2	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethene	32 D	1.0	0.90	2	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	1.0	0.92	2	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	2.0	0.78	2	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	1.0	0.82	2	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	2.0	0.90	2	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND U	2.0	0.72	2	03/21/07	03/21/07	PWG0700478	
1-Bromo-3-chloropropane	ND U	4.0	1.6	2	03/21/07	03/21/07	PWG0700478	
1,1-Bromoethane (EDB)	ND U	2.0	0.76	2	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	1.0	0.72	2	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	1.3 D	1.0	0.66	2	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropane	ND U	1.0	0.80	2	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	2.0	0.80	2	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	1.0	0.66	2	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	1.0	0.82	2	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	1.0	0.74	2	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	1.0	0.76	2	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND U	20	3.4	2	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	2.0	0.80	2	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	20	3.4	2	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	2.0	0.76	2	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	2.0	0.68	2	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	20	3.0	2	03/21/07	03/21/07	PWG0700478	
Acetone	ND U	20	4.4	2	03/21/07	03/21/07	PWG0700478	
Benzene	ND U	1.0	0.84	2	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	2.0	0.80	2	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND U	1.0	0.80	2	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	ND U	2.0	0.80	2	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	2.0	0.82	2	03/21/07	03/21/07	PWG0700478	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

## Volatile Organic Compounds

**Sample Name:** CPT-31-77      **Units:** ug/L  
**Lab Code:** P0700256-022      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	2.0	1.3	2	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	4.0	1.7	2	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	1.0	0.96	2	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	1.0	0.72	2	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	2.0	0.92	2	03/21/07	03/21/07	PWG0700478	
Chloroform	10 D	1.0	0.80	2	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND U	2.0	0.80	2	03/21/07	03/21/07	PWG0700478	
cis-1,2-Dichloroethene	12 D	1.0	0.78	2	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND U	1.0	0.68	2	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND U	2.0	0.66	2	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	1.0	0.78	2	03/21/07	03/21/07	PWG0700478	
Dichlorodifluoromethane	ND U	2.0	0.96	2	03/21/07	03/21/07	PWG0700478	*
Ethylbenzene	ND U	1.0	0.82	2	03/21/07	03/21/07	PWG0700478	
Hexachlorobutadiene	ND U	2.0	0.92	2	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	2.0	0.68	2	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	3.0	2.2	2	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	4.0	1.5	2	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	4.0	0.86	2	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	2.0	0.74	2	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	2.0	0.82	2	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND U	2.0	0.72	2	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	2.0	0.74	2	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	1.0	0.74	2	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	2.0	0.82	2	03/21/07	03/21/07	PWG0700478	
Tetrachloroethene (PCE)	110 D	1.0	0.76	2	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	1.0	0.72	2	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	ND U	1.0	0.86	2	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	1.0	0.78	2	03/21/07	03/21/07	PWG0700478	
Trichloroethene (TCE)	88 D	1.0	0.76	2	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	14 D	2.0	1.2	2	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	20	1.8	2	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	ND U	1.0	0.86	2	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments: \_\_\_\_\_

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** 03/14/2007  
**Date Received:** 03/14/2007

**Volatile Organic Compounds**

**Sample Name:** CPI-31-77                   **Units:** ug/L  
**Lab Code:** P0700256-022                   **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	112	73-129	03/21/07	Acceptable
Toluene-d8	104	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	100	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Ground water

**Service Request:** P0700256  
**Date Collected:** NA  
**Date Received:** NA

## Volatile Organic Compounds

**Sample Name:** Method Blank      **Units:** ug/L  
**Lab Code:** PWG0700476-3      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	*
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,1,2-Trichlorotrifluoroethane	ND U	2.0	1.0	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethane	ND U	0.50	0.35	1	03/21/07	03/21/07	PWG0700476	
1,1-Dichloroethylene	ND U	0.50	0.45	1	03/21/07	03/21/07	PWG0700476	*
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700476	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700476	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700476	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700476	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,2-Dichloropropane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700476	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700476	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700476	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700476	
Acetone	ND U	10	2.2	1	03/21/07	03/21/07	PWG0700476	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700476	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromodichloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Ground water

**Service Request:** P0700256  
**Date Collected:** NA  
**Date Received:** NA

## Volatile Organic Compounds

<b>Sample Name:</b>	Method Blank	<b>Units:</b>	ug/L
<b>Lab Code:</b>	PWG0700476-3	<b>Basis:</b>	NA
<b>Extraction Method:</b>	EPA 5030B	<b>Level:</b>	Low
<b>Analysis Method:</b>	8260B		

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700476	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700476	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700476	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
Chloroform	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700476	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700476	
cis-1,2-Dichloroethene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/21/07	03/21/07	PWG0700476	
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700476	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
Dichlorodifluoromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700476	
Ethene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700476	
Heptachlorobutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700476	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700476	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700476	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700476	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700476	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
Naphthalene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700476	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700476	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700476	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700476	
Tetrachloroethene (PCE)	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700476	
trans-1,2-Dichloroethene	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700476	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700476	
Trichloroethene (TCE)	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700476	
Trichlorofluoromethane	ND U	1.0	0.60	1	03/21/07	03/21/07	PWG0700476	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700476	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700476	

\* See Case Narrative

Comments: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Results

Client: GeoSyntec Consultants  
Project: McKesson/HA0620-13  
Sample Matrix: Ground water

Service Request: P0700256  
Date Collected: NA  
Date Received: NA

**Volatile Organic Compounds**

Sample Name: Method Blank                          Units: ug/L  
Lab Code: PWG0700476-3                          Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	114	73-129	03/21/07	Acceptable
Toluene-d8	108	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	101	63-118	03/21/07	Acceptable

Comments: \_\_\_\_\_

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** NA  
**Date Received:** NA

## Volatile Organic Compounds

<b>Sample Name:</b>	Method Blank	<b>Units:</b>	ug/L
<b>Lab Code:</b>	PWG0700478-4	<b>Basis:</b>	NA
<b>Extraction Method:</b>	EPA 5030B	<b>Level:</b>	Low
<b>Analysis Method:</b>	8260B		

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	*
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichloroethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,1,2-Trichlorotrifluoroethane	ND U	2.0	1.0	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethane	ND U	0.50	0.35	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloroethene	ND U	0.50	0.45	1	03/21/07	03/21/07	PWG0700478	
1,1-Dichloropropene	ND U	0.50	0.46	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichlorobenzene	ND U	1.0	0.39	1	03/21/07	03/21/07	PWG0700478	
1,2,3-Trichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trichlorobenzene	ND U	1.0	0.45	1	03/21/07	03/21/07	PWG0700478	
1,2,4-Trimethylbenzene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
1-Bromo-3-chloropropane	ND U	2.0	0.76	1	03/21/07	03/21/07	PWG0700478	
1,2-Dibromoethane (EDB)	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloroethane (EDC)	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,2-Dichloropropane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3,5-Trimethylbenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichlorobenzene	ND U	0.50	0.33	1	03/21/07	03/21/07	PWG0700478	
1,3-Dichloropropane	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
1,4-Dichlorobenzene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
2,2-Dichloropropane	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
2-Butanone (MEK)	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
2-Chlorotoluene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
2-Hexanone	ND U	10	1.7	1	03/21/07	03/21/07	PWG0700478	
4-Chlorotoluene	ND U	1.0	0.38	1	03/21/07	03/21/07	PWG0700478	
4-Isopropyltoluene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
4-Methyl-2-pentanone (MIBK)	ND U	10	1.5	1	03/21/07	03/21/07	PWG0700478	
Acetone	ND U	10	2.2	1	03/21/07	03/21/07	PWG0700478	
Benzene	ND U	0.50	0.42	1	03/21/07	03/21/07	PWG0700478	
Bromobenzene	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromochloromethane	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromodichloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
Bromoform	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** NA  
**Date Received:** NA

## Volatile Organic Compounds

<b>Sample Name:</b>	Method Blank	<b>Units:</b>	ug/L
<b>Lab Code:</b>	PWG0700478-4	<b>Basis:</b>	NA
<b>Extraction Method:</b>	EPA 5030B	<b>Level:</b>	Low
<b>Analysis Method:</b>	8260B		

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/21/07	03/21/07	PWG0700478	
Carbon Disulfide	ND U	2.0	0.83	1	03/21/07	03/21/07	PWG0700478	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/21/07	03/21/07	PWG0700478	
Chlorobenzene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
Chloroethane	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Chloroform	ND U	0.50	0.40	1	03/21/07	03/21/07	PWG0700478	
Chloromethane	ND U	1.0	0.40	1	03/21/07	03/21/07	PWG0700478	
cis-1,2-Dichloroethene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/21/07	03/21/07	PWG0700478	
Dibromochloromethane	ND U	1.0	0.33	1	03/21/07	03/21/07	PWG0700478	*
Dibromomethane	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Dichlorodifluoromethane	ND U	1.0	0.48	1	03/21/07	03/21/07	PWG0700478	
Ethylbenzene	ND U	0.50	0.41	1	03/21/07	03/21/07	PWG0700478	
Hexachlorobutadiene	ND U	1.0	0.46	1	03/21/07	03/21/07	PWG0700478	
Isopropylbenzene	ND U	1.0	0.34	1	03/21/07	03/21/07	PWG0700478	
Total Xylenes	ND U	1.5	1.1	1	03/21/07	03/21/07	PWG0700478	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/21/07	03/21/07	PWG0700478	
Methylene Chloride	ND U	2.0	0.43	1	03/21/07	03/21/07	PWG0700478	
n-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
n-Propylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Naphthalene	ND U	1.0	0.36	1	03/21/07	03/21/07	PWG0700478	
sec-Butylbenzene	ND U	1.0	0.37	1	03/21/07	03/21/07	PWG0700478	
Styrene	ND U	0.50	0.37	1	03/21/07	03/21/07	PWG0700478	
tert-Butylbenzene	ND U	1.0	0.41	1	03/21/07	03/21/07	PWG0700478	
Tetrachloroethene (PCE)	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Toluene	ND U	0.50	0.36	1	03/21/07	03/21/07	PWG0700478	
trans-1,2-Dichloroethene	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/21/07	03/21/07	PWG0700478	
Trichloroethene (TCE)	ND U	0.50	0.38	1	03/21/07	03/21/07	PWG0700478	
Trichlorofluoromethane	ND U	1.0	0.60	1	03/21/07	03/21/07	PWG0700478	
Vinyl Acetate	ND U	10	0.90	1	03/21/07	03/21/07	PWG0700478	
Vinyl Chloride	ND U	0.50	0.43	1	03/21/07	03/21/07	PWG0700478	

\* See Case Narrative

Comments: \_\_\_\_\_

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Collected:** NA  
**Date Received:** NA

## Volatile Organic Compounds

**Sample Name:** Method Blank      **Units:** ug/L  
**Lab Code:** PWG0700478-4      **Basis:** NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	111	73-129	03/21/07	Acceptable
Toluene-d8	109	76-122	03/21/07	Acceptable
4-Bromofluorobenzene	100	63-118	03/21/07	Acceptable

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## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Ground water

**Service Request:** P0700256  
**Date Collected:** NA  
**Date Received:** NA

## Volatile Organic Compounds

**Sample Name:** Method Blank      **Units:** ug/L  
**Lab Code:** PWG0700497-3      **Basis:** NA  
**Extraction Method:** EPA 5030B      **Level:** Low  
**Analysis Method:** 8260B

Analyte Name	Result	Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.37	1	03/23/07	03/23/07	PWG0700497	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.46	1	03/23/07	03/23/07	PWG0700497	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.37	1	03/23/07	03/23/07	PWG0700497	
1,1,2-Trichloroethane	ND	U	0.50	0.40	1	03/23/07	03/23/07	PWG0700497	
1,1,2-Trichlorotrifluoroethane	ND	U	2.0	1.0	1	03/23/07	03/23/07	PWG0700497	
1,1-Dichloroethane	ND	U	0.50	0.35	1	03/23/07	03/23/07	PWG0700497	
1,1-Dichloroethylene	ND	U	0.50	0.45	1	03/23/07	03/23/07	PWG0700497	
1,1-Dichloropropene	ND	U	0.50	0.46	1	03/23/07	03/23/07	PWG0700497	
1,2,3-Trichlorobenzene	ND	U	1.0	0.39	1	03/23/07	03/23/07	PWG0700497	
1,2,3-Trichloropropane	ND	U	0.50	0.41	1	03/23/07	03/23/07	PWG0700497	
1,2,4-Trichlorobenzene	ND	U	1.0	0.45	1	03/23/07	03/23/07	PWG0700497	
1,2,4-Trimethylbenzene	ND	U	1.0	0.36	1	03/23/07	03/23/07	PWG0700497	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.76	1	03/23/07	03/23/07	PWG0700497	
1,2-Dibromoethane (EDB)	ND	U	1.0	0.38	1	03/23/07	03/23/07	PWG0700497	
1,2-Dichlorobenzene	ND	U	0.50	0.36	1	03/23/07	03/23/07	PWG0700497	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.33	1	03/23/07	03/23/07	PWG0700497	
1,2-Dichloropropane	ND	U	0.50	0.40	1	03/23/07	03/23/07	PWG0700497	
1,3,5-Trimethylbenzene	ND	U	1.0	0.40	1	03/23/07	03/23/07	PWG0700497	
1,3-Dichlorobenzene	ND	U	0.50	0.33	1	03/23/07	03/23/07	PWG0700497	
1,3-Dichloropropane	ND	U	0.50	0.41	1	03/23/07	03/23/07	PWG0700497	
1,4-Dichlorobenzene	ND	U	0.50	0.37	1	03/23/07	03/23/07	PWG0700497	
2,2-Dichloropropane	ND	U	0.50	0.38	1	03/23/07	03/23/07	PWG0700497	
2-Butanone (MEK)	ND	U	10	1.7	1	03/23/07	03/23/07	PWG0700497	
2-Chlorotoluene	ND	U	1.0	0.40	1	03/23/07	03/23/07	PWG0700497	
2-Hexanone	ND	U	10	1.7	1	03/23/07	03/23/07	PWG0700497	
4-Chlorotoluene	ND	U	1.0	0.38	1	03/23/07	03/23/07	PWG0700497	
4-Isopropyltoluene	ND	U	1.0	0.34	1	03/23/07	03/23/07	PWG0700497	
4-Methyl-2-pentanone (MIBK)	ND	U	10	1.5	1	03/23/07	03/23/07	PWG0700497	
Acetone	ND	U	10	2.2	1	03/23/07	03/23/07	PWG0700497	
Benzene	ND	U	0.50	0.42	1	03/23/07	03/23/07	PWG0700497	
Bromobenzene	ND	U	1.0	0.40	1	03/23/07	03/23/07	PWG0700497	
Bromochloromethane	ND	U	0.50	0.40	1	03/23/07	03/23/07	PWG0700497	
Bromodichloromethane	ND	U	1.0	0.40	1	03/23/07	03/23/07	PWG0700497	
Bromoform	ND	U	1.0	0.41	1	03/23/07	03/23/07	PWG0700497	*

Comments: \_\_\_\_\_

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Ground water

**Service Request:** P0700256  
**Date Collected:** NA  
**Date Received:** NA

## Volatile Organic Compounds

<b>Sample Name:</b>	Method Blank	<b>Units:</b>	ug/L
<b>Lab Code:</b>	PWG0700497-3	<b>Basis:</b>	NA
<b>Extraction Method:</b>	EPA 5030B	<b>Level:</b>	Low
<b>Analysis Method:</b>	8260B		

Analyte Name	Result Q	PQL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromomethane	ND U	1.0	0.61	1	03/23/07	03/23/07	PWG0700497	
Carbon Disulfide	ND U	2.0	0.83	1	03/23/07	03/23/07	PWG0700497	
Carbon Tetrachloride	ND U	0.50	0.48	1	03/23/07	03/23/07	PWG0700497	
Chlorobenzene	ND U	0.50	0.36	1	03/23/07	03/23/07	PWG0700497	
Chloroethane	ND U	1.0	0.46	1	03/23/07	03/23/07	PWG0700497	
Chloroform	ND U	0.50	0.40	1	03/23/07	03/23/07	PWG0700497	
Chloromethane	ND U	1.0	0.40	1	03/23/07	03/23/07	PWG0700497	
cis-1,2-Dichloroethene	ND U	0.50	0.39	1	03/23/07	03/23/07	PWG0700497	
cis-1,3-Dichloropropene	ND U	0.50	0.34	1	03/23/07	03/23/07	PWG0700497	
Dibromochloromethane	ND U	1.0	0.33	1	03/23/07	03/23/07	PWG0700497	
Dibromomethane	ND U	0.50	0.39	1	03/23/07	03/23/07	PWG0700497	
Dichlorodifluoromethane	ND U	1.0	0.48	1	03/23/07	03/23/07	PWG0700497	
F-benzene	ND U	0.50	0.41	1	03/23/07	03/23/07	PWG0700497	
I-chlorobutadiene	ND U	1.0	0.46	1	03/23/07	03/23/07	PWG0700497	
Isopropylbenzene	ND U	1.0	0.34	1	03/23/07	03/23/07	PWG0700497	
Total Xylenes	ND U	1.5	1.1	1	03/23/07	03/23/07	PWG0700497	
Methyl tert-Butyl Ether	ND U	2.0	0.71	1	03/23/07	03/23/07	PWG0700497	
Methylene Chloride	ND U	2.0	0.43	1	03/23/07	03/23/07	PWG0700497	
n-Butylbenzene	ND U	1.0	0.37	1	03/23/07	03/23/07	PWG0700497	
n-Propylbenzene	ND U	1.0	0.41	1	03/23/07	03/23/07	PWG0700497	
Naphthalene	ND U	1.0	0.36	1	03/23/07	03/23/07	PWG0700497	
sec-Butylbenzene	ND U	1.0	0.37	1	03/23/07	03/23/07	PWG0700497	
Styrene	ND U	0.50	0.37	1	03/23/07	03/23/07	PWG0700497	
tert-Butylbenzene	ND U	1.0	0.41	1	03/23/07	03/23/07	PWG0700497	
Tetrachloroethene (PCE)	ND U	0.50	0.38	1	03/23/07	03/23/07	PWG0700497	
Toluene	ND U	0.50	0.36	1	03/23/07	03/23/07	PWG0700497	
trans-1,2-Dichloroethene	ND U	0.50	0.43	1	03/23/07	03/23/07	PWG0700497	
trans-1,3-Dichloropropene	ND U	0.50	0.39	1	03/23/07	03/23/07	PWG0700497	
Trichloroethene (TCE)	ND U	0.50	0.38	1	03/23/07	03/23/07	PWG0700497	
Trichlorofluoromethane	ND U	1.0	0.60	1	03/23/07	03/23/07	PWG0700497	*
Vinyl Acetate	ND U	10	0.90	1	03/23/07	03/23/07	PWG0700497	
Vinyl Chloride	ND U	0.50	0.43	1	03/23/07	03/23/07	PWG0700497	

\* See Case Narrative

Contents: \_\_\_\_\_

**COLUMBIA ANALYTICAL SERVICES, INC.**

## Analytical Results

Client: GeoSyntec Consultants  
Project: McKesson/HA0620-13  
Sample Matrix: Ground water

Service Request: P0700256  
Date Collected: NA  
Date Received: NA

**Volatile Organic Compounds**

Sample Name: Method Blank                          Units: ug/L  
Lab Code: PWG0700497-3                          Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	108	73-129	03/23/07	Acceptable
Toluene-d8	109	76-122	03/23/07	Acceptable
4-Bromofluorobenzene	101	63-118	03/23/07	Acceptable

Comments: \_\_\_\_\_

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Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256

**Surrogate Recovery Summary**  
**Volatile Organic Compounds**

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: PERCENT  
 Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>
TB-1	P0700256-001	111	107	99
CPI-35-50	P0700256-002	111	104	99
CPT-35-63	P0700256-003	116	109	102
CPT-35-75	P0700256-004	113	109	101
CPI-36-50	P0700256-005	126	121	115
CPT-36-61	P0700256-006	113	107	103
TB-1	P0700256-007	111	108	99
CPI-37-54	P0700256-008	123	115	110
CPI-37-70	P0700256-009	112	103	99
CPI-38-52	P0700256-010	113	110	104
CPI-38-62	P0700256-011	113	105	101
CPT-34-54	P0700256-012	110	107	100
CPT-34-62	P0700256-013	118	110	108
CPT-34-73	P0700256-014	119	113	110
TB-1	P0700256-015	111	109	102
CPI-33-54	P0700256-016	111	108	102
C 33-64	P0700256-017	120	115	109
C 32-54	P0700256-018	111	106	100
CPT-32-66	P0700256-019	109	106	100
CPI-31-55	P0700256-020	114	107	98
CPI-31-66	P0700256-021	115	108	100
CPT-31-77	P0700256-022	112	104	100
Method Blank	PWG0700476-3	114	108	101
Method Blank	PWG0700478-4	111	109	100
Method Blank	PWG0700497-3	108	109	101
CPT-37-70MS	PWG0700478-1	115	109	106
CPT-37-70DMS	PWG0700478-2	140 *	131 *	128 *
Lab Control Sample	PWG0700476-1	115	108	107
Duplicate Lab Control Sample	PWG0700476-2	114	108	106
Lab Control Sample	PWG0700478-3	114	108	107
Lab Control Sample	PWG0700497-1	111	111	106
Duplicate Lab Control Sample	PWG0700497-2	110	110	105

**Surrogate Recovery Control Limits (%)**

Sur1 = Dibromofluoromethane	73-129
Sur2 = Toluene-d8	76-122
Sur3 = 4-Bromofluorobenzene	63-118

R = flagged with an asterisk (\*) indicate values outside control criteria.

R# = flagged with a pound (#) indicate the control criteria is not applicable.

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13

**Service Request:** P0700256  
**Date Analyzed:** 03/21/2007  
**Time Analyzed:** 07:08

**Internal Standard Area and RI Summary  
Volatile Organic Compounds**

**File ID:** J:\MS10\DATA\2007\_03\21\0321003.D  
**Instrument ID:** MS10  
**Analysis Method:** 8260B

**Lab Code:** PWG0700477-2  
**Analysis Lot:** PWG0700477

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	<u>Area</u>	<u>RI</u>	<u>Area</u>	<u>RI</u>	<u>Area</u>	<u>RI</u>
<b>Results ==&gt;</b>	386,857	8.16	274,611	11.49	127,094	13.35
<b>Upper Limit ==&gt;</b>	773,714	8.66	549,222	11.99	254,188	13.85
<b>Lower Limit ==&gt;</b>	193,429	7.66	137,306	10.99	63,547	12.85
<b>ICAL Result ==&gt;</b>	462,228	8.16	300,908	11.49	134,042	13.34

*Associated Analyses*

Lab Control Sample	PWG0700476-1	404,713	8.16	285,968	11.49	130,163	13.35
Duplicate Lab Control Sample	PWG0700476-2	418,690	8.16	298,366	11.49	133,612	13.35
Method Blank	PWG0700476-3	407,320	8.16	288,770	11.49	123,979	13.34
IB-1	P0700256-001	405,668	8.16	285,347	11.49	121,240	13.35
IB-1	P0700256-007	408,048	8.16	285,364	11.49	120,515	13.34
CPT-35-50	P0700256-002	402,766	8.16	284,165	11.49	123,202	13.34
CPT-35-63	P0700256-003	399,061	8.16	284,441	11.49	123,658	13.34
CPT-35-75	P0700256-004	406,487	8.16	289,026	11.49	124,222	13.34
CPT-36-61	P0700256-006	405,327	8.16	284,660	11.49	124,914	13.34
CPT-38-62	P0700256-011	404,930	8.16	287,640	11.49	124,972	13.34

Results flagged with an asterisk (\*) indicate values outside control criteria.

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13

**Service Request:** P0700256  
**Date Analyzed:** 03/21/2007  
**Time Analyzed:** 13:52

**Internal Standard Area and RT Summary  
Volatile Organic Compounds**

**File ID:** J:\MS10\DATA\2007\_03\21\0321020.D  
**Instrument ID:** MS10  
**Analysis Method:** 8260B

**Lab Code:** PWG0700479-2  
**Analysis Lot:** PWG0700479

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	<u>Area</u>	<u>RI</u>	<u>Area</u>	<u>RI</u>	<u>Area</u>	<u>RT</u>
<b>Results ==&gt;</b>	418,813	8.16	298,073	11.49	138,444	13.35
<b>Upper Limit ==&gt;</b>	837,626	8.66	596,146	11.99	276,888	13.85
<b>Lower Limit ==&gt;</b>	209,407	7.66	149,037	10.99	69,222	12.85
<b>ICAL Result ==&gt;</b>	462,228	8.16	300,908	11.49	134,042	13.34

*Associated Analyses*

Lab Control Sample	PWG0700478-3	428,521	8.16	301,307	11.49	142,692	13.35
Method Blank	PWG0700478-4	449,588	8.16	313,449	11.49	133,274	13.34
IB-1	P0700256-015	428,157	8.16	302,270	11.49	129,697	13.34
CPI-37-70	P0700256-009	414,860	8.16	291,025	11.49	125,338	13.34
CPI-37-70MS	PWG0700478-1	426,982	8.16	304,296	11.49	137,572	13.35
CPI-37-70DMS	PWG0700478-2	363,597	8.16	259,850	11.49	117,341	13.34
CPI-36-50	P0700256-005	333,824	8.16	235,108	11.49	103,119	13.34
CPI-37-54	P0700256-008	405,110	8.16	284,038	11.49	123,027	13.34
CPI-38-52	P0700256-010	427,282	8.16	297,679	11.49	130,569	13.34
CPI-34-54	P0700256-012	446,530	8.16	313,312	11.49	134,866	13.34
CPI-4-62	P0700256-013	406,552	8.16	280,854	11.49	128,047	13.34
CPI-34-73	P0700256-014	411,789	8.16	290,280	11.49	128,321	13.35
CPI-33-64	P0700256-017	410,940	8.16	290,139	11.49	125,912	13.35
CPI-31-77	P0700256-022	440,290	8.16	312,450	11.49	135,421	13.34
CPI-33-54	P0700256-016	440,076	8.16	308,503	11.49	135,291	13.34
CPI-32-66	P0700256-019	453,815	8.16	317,238	11.49	136,497	13.34
CPI-31-66	P0700256-021	455,455	8.16	316,976	11.49	136,720	13.34
CPI-32-54	P0700256-018	441,101	8.16	310,499	11.49	134,319	13.35
CPI-31-55	P0700256-020	435,247	8.16	305,381	11.49	132,000	13.34

Results flagged with an asterisk (\*) indicate values outside control criteria.

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13

**Service Request:** P0700256  
**Date Analyzed:** 03/23/2007  
**Time Analyzed:** 17:08

**Internal Standard Area and RT Summary**  
**Volatile Organic Compounds**

**File ID:** J:\MS10\DATA\2007\_03\23\0323027A.D  
**Instrument ID:** MS10  
**Analysis Method:** 8260B

**Lab Code:** PWG0700498-2  
**Analysis Lot:** PWG0700498

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	<u>Area</u>	<u>RI</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RI</u>
<b>Results ==&gt;</b>	518,125	8.16	367,440	11.49	168,221	13.35
<b>Upper Limit ==&gt;</b>	1,036,250	8.66	734,880	11.99	336,442	13.85
<b>Lower Limit ==&gt;</b>	259,063	7.66	183,720	10.99	84,111	12.85
<b>ICAL Result ==&gt;</b>	461,679	8.16	325,002	11.49	147,970	13.34

*Associated Analyses*

Lab Control Sample	PWG0700497-1	503,379	8.16	355,295	11.49	164,293	13.35
Duplicate Lab Control Sample	PWG0700497-2	527,042	8.16	370,928	11.49	167,764	13.35
Method Blank	PWG0700497-3	503,205	8.16	349,843	11.49	153,504	13.34
CPI-36-50RE	P0700256-005	422,729	8.16	298,931	11.49	132,371	13.34

Results flagged with an asterisk (\*) indicate values outside control criteria.

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Extracted:** 03/21/2007  
**Date Analyzed:** 03/21/2007

**Matrix Spike/Duplicate Matrix Spike Summary**  
**Volatile Organic Compounds**

<b>Sample Name:</b> CPT-37-70	<b>Units:</b> ug/L
<b>Lab Code:</b> P0700256-009	<b>Basis:</b> NA
<b>Extraction Method:</b> EPA 5030B	<b>Level:</b> Low
<b>Analysis Method:</b> 8260B	<b>Extraction Lot:</b> PWG0700478

Analyte Name	Sample Result	CPT-37-70MS			CPT-37-70DMS			%Rec Limits	RPD	RPD Limit			
		PWG0700478-1			PWG0700478-2								
		Matrix Spike			Duplicate Matrix Spike								
		Result	Expected	%Rec	Result	Expected	%Rec						
1,1,1-Trichloroethane (TCA)	ND	7.18	10.0	72	11.2	10.0	112	52-158	44 *	25			
1,1-Dichloroethane	6.0	13.6	10.0	76	20.9	10.0	149 *	59-145	43 *	25			
1,1-Dichloroethylene	6.1	12.9	10.0	68	20.2	10.0	141	27-176	44 *	25			
1,2-Dichloroethane (EDC)	ND	7.42	10.0	74	11.0	10.0	110	56-147	39 *	25			
1,2-Dichloropropane	ND	7.37	10.0	74	11.3	10.0	113	60-139	42 *	25			
1,3,5-Trimethylbenzene	ND	5.07	10.0	51	7.19	10.0	72	45-143	35 *	25			
1,3-Dichlorobenzene	ND	7.00	10.0	70	10.7	10.0	107	62-134	42 *	25			
Benzene	ND	7.00	10.0	70	10.9	10.0	109	58-148	44 *	25			
Chlorobenzene	ND	7.20	10.0	72	11.0	10.0	110	60-136	42 *	25			
Cofor	2.6	10.2	10.0	77	15.8	10.0	133	60-147	43 *	25			
Ethylbenzene	ND	6.56	10.0	66	10.3	10.0	103	50-142	45 *	25			
Methyl tert-Butyl Ether	ND	15.1	20.0	76	22.3	20.0	112	66-136	39 *	25			
Tetrachloroethylene (PCE)	10	18.6	10.0	83	29.1	10.0	187 *	27-168	44 *	25			
Toluene	ND	6.65	10.0	67	10.1	10.0	101	56-137	41 *	25			
Trichloroethylene (TCE)	5.3	12.8	10.0	75	19.9	10.0	146	42-156	43 *	25			
Vinyl Chloride	ND	6.20	10.0	62	9.39	10.0	94	40-177	41 *	25			

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Ground water

**Service Request:** P0700256  
**Date Extracted:** 03/21/2007  
**Date Analyzed:** 03/21/2007

**Lab Control Spike/Duplicate Lab Control Spike Summary**  
**Volatile Organic Compounds**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** PWG0700476

Analyte Name	Lab Control Sample PWG0700476-1			Duplicate Lab Control Sample PWG0700476-2			%Rec Limits	RPD	RPD Limit
	Result	Expected	%Rec	Result	Expected	%Rec			
			Lab Control Spike			Duplicate Lab Control Spike			
1,1,1,2-Tetrachloroethane	13.2	10.0	132 *	13.2	10.0	132 *	88-118	0	25
1,1,1-Trichloroethane (TCA)	8.55	10.0	86	9.24	10.0	92	83-120	8	25
1,1,2,2-Tetrachloroethane	10.2	10.0	102	10.1	10.0	101	81-120	1	25
1,1,2-Trichloroethane	9.98	10.0	100	10.3	10.0	103	86-118	3	25
1,1,2-Trichlorotrifluoroethane	7.92	10.0	79	9.02	10.0	90	76-143	13	25
1,1-Dichloroethane	9.21	10.0	92	9.43	10.0	94	82-123	2	25
1,1-Dichloroethene	7.78	10.0	78 *	8.82	10.0	88	81-125	13	25
1,1-Dichloropropene	7.11	10.0	71	7.83	10.0	78	71-113	10	25
1,2,3-Trichlorobenzene	10.5	10.0	105	10.0	10.0	100	60-128	4	25
1,2,3-Trichloropropane	9.72	10.0	97	9.67	10.0	97	78-119	1	25
1,2,4-Trichlorobenzene	10.2	10.0	102	9.64	10.0	96	71-125	6	25
1,2,4-Trimethylbenzene	9.07	10.0	91	9.17	10.0	92	87-115	1	25
1,2-Dibromo-3-chloropropane	22.6	20.0	113	21.8	20.0	109	60-125	4	25
1,2-Dibromoethane (EDB)	10.0	10.0	100	10.1	10.0	101	83-115	1	25
1,2-Dichlorobenzene	9.87	10.0	99	9.92	10.0	99	88-117	1	25
1,2-Dichloroethane (EDC)	9.81	10.0	98	9.90	10.0	99	84-125	1	25
1,2-Dichloropropane	9.94	10.0	99	10.2	10.0	102	77-127	2	25
1,3,5-Trimethylbenzene	8.56	10.0	86	8.82	10.0	88	85-115	3	25
1,3-Dichlorobenzene	9.48	10.0	95	9.54	10.0	95	83-124	1	25
1,3-Dichloropropane	9.58	10.0	96	9.85	10.0	99	83-114	3	25
1,4-Dichlorobenzene	9.78	10.0	98	9.78	10.0	98	87-118	0	25
2,2-Dichloropropane	9.04	10.0	90	9.50	10.0	95	85-129	5	25
2-Butanone (MEK)	56.6	50.0	113	55.1	50.0	110	71-125	3	25
2-Chlorotoluene	8.78	10.0	88	9.20	10.0	92	82-116	5	25
2-Hexanone	55.7	50.0	111	54.8	50.0	110	69-123	2	25
4-Chlorotoluene	8.84	10.0	88	9.09	10.0	91	79-115	3	25
4-Isopropyltoluene	8.30	10.0	83	8.37	10.0	84	77-119	1	25
4-Methyl-2-pentanone (MIBK)	57.2	50.0	114	56.3	50.0	113	71-128	2	25
Acetone	56.8	50.0	114	53.1	50.0	106	71-122	7	25
Benzene	9.19	10.0	92	9.61	10.0	96	83-123	4	25
Bromobenzene	9.78	10.0	98	9.96	10.0	100	85-117	2	25
Bromochloromethane	10.4	10.0	104	10.2	10.0	102	83-128	2	25
Bromodichloromethane	10.6	10.0	106	10.8	10.0	108	88-122	2	25
Bromoform	12.9	10.0	129	12.6	10.0	126	82-129	2	25
Bromomethane	8.18	10.0	82	9.57	10.0	96	75-146	16	25
Carbon Disulfide	15.1	20.0	75	15.8	20.0	79	62-116	5	25

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Ground water

Service Request: P0700256  
 Date Extracted: 03/21/2007  
 Date Analyzed: 03/21/2007

**Lab Control Spike/Duplicate Lab Control Spike Summary**  
**Volatile Organic Compounds**

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: PWG0700476

Analyte Name	Lab Control Sample PWG0700476-1			Duplicate Lab Control Sample PWG0700476-2			%Rec Limits	RPD	RPD Limit			
	Lab Control Spike			Duplicate Lab Control Spike								
	Result	Expected	%Rec	Result	Expected	%Rec						
Carbon Tetrachloride	9.68	10.0	97	10.8	10.0	108	80-125	11	25			
Chlorobenzene	9.46	10.0	95	9.86	10.0	99	84-117	4	25			
Chloroethane	8.99	10.0	90	9.23	10.0	92	75-133	3	25			
Chloroform	9.77	10.0	98	9.94	10.0	99	88-120	2	25			
Chloromethane	10.2	10.0	102	9.91	10.0	99	73-136	3	25			
cis-1,2-Dichloroethene	9.70	10.0	97	9.87	10.0	99	83-125	2	25			
cis-1,3-Dichloropropene	9.92	10.0	99	10.2	10.0	102	86-126	3	25			
Dibromochloromethane	12.9	10.0	129 *	12.8	10.0	128 *	87-120	1	25			
Dibromomethane	10.2	10.0	102	10.2	10.0	102	85-122	0	25			
Dichlorodifluoromethane	13.0	10.0	130	14.3	10.0	143	43-151	10	25			
Ethylbenzene	8.69	10.0	87	9.37	10.0	94	79-116	8	25			
1,3-chlorobutadiene	8.81	10.0	88	8.60	10.0	86	68-137	2	25			
Isopropylbenzene	8.19	10.0	82	8.60	10.0	86	77-112	5	25			
Total Xylenes	26.6	30.0	89	27.9	30.0	93	82-113	5	25			
Methyl tert-Butyl Ether	19.8	20.0	99	19.7	20.0	98	83-127	0	25			
Methylene Chloride	10.0	10.0	100	10.0	10.0	100	85-130	0	25			
n-Butylbenzene	8.07	10.0	81	7.99	10.0	80	76-115	1	25			
n-Propylbenzene	8.23	10.0	82	8.58	10.0	86	79-117	4	25			
Naphthalene	10.5	10.0	105	10.2	10.0	102	62-135	2	25			
sec-Butylbenzene	7.46	10.0	75	7.66	10.0	77	75-112	3	25			
Styrene	8.88	10.0	89	8.97	10.0	90	84-119	1	25			
tert-Butylbenzene	8.22	10.0	82	8.46	10.0	85	79-116	3	25			
Tetrachloroethene (PCE)	7.85	10.0	79	9.05	10.0	91	76-123	14	25			
Toluene	8.81	10.0	88	9.43	10.0	94	83-115	7	25			
trans-1,2-Dichloroethene	8.37	10.0	84	8.97	10.0	90	78-124	7	25			
trans-1,3-Dichloropropene	9.70	10.0	97	9.97	10.0	100	82-121	3	25			
Trichloroethene (TCE)	8.63	10.0	86	9.13	10.0	91	78-120	6	25			
Trichlorofluoromethane	8.50	10.0	85	8.86	10.0	89	45-158	4	25			
Vinyl Acetate	22.6	20.0	113	21.6	20.0	108	64-163	5	25			
Vinyl Chloride	9.72	10.0	97	9.71	10.0	97	68-139	0	25			

R = flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Extracted: 03/21/2007  
 Date Analyzed: 03/21/2007

**Lab Control Spike Summary**  
**Volatile Organic Compounds**

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA

Level: Low

Extraction Lot: PWG0700478

## Lab Control Sample

PWG0700478-3

## Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	13.5	10.0	135 *	88-118
1,1,1-Trichloroethane (ICA)	10.2	10.0	102	83-120
1,1,2,2-Tetrachloroethane	9.63	10.0	96	81-120
1,1,2-Trichloroethane	9.99	10.0	100	86-118
1,1,2-Trichlorotrifluoroethane	11.2	10.0	112	76-143
1,1-Dichloroethane	9.80	10.0	98	82-123
1,1-Dichloroethene	9.75	10.0	98	81-125
1,1-Dichloropropene	8.55	10.0	86	71-113
1,2,3-Trichlorobenzene	10.7	10.0	107	60-128
1,2,3-Trichloropropane	9.32	10.0	93	78-119
1,2,4-Trichlorobenzene	10.6	10.0	106	71-125
1,2,4-Trimethylbenzene	9.49	10.0	95	87-115
1,2-Dibromo-3-chloropropane	21.0	20.0	105	60-125
1,2-Dibromoethane (EDB)	9.93	10.0	99	83-115
1,2-Dichlorobenzene	10.0	10.0	100	88-117
1,2-Dichloroethane (EDC)	9.74	10.0	97	84-125
1,2-Dichloropropane	10.2	10.0	102	77-127
1,3,5-Trimethylbenzene	9.38	10.0	94	85-115
1,3-Dichlorobenzene	9.71	10.0	97	83-124
1,3-Dichloropropane	9.62	10.0	96	83-114
1,4-Dichlorobenzene	9.92	10.0	99	87-118
2,2-Dichloropropane	10.3	10.0	103	85-129
2-Butanone (MEK)	50.6	50.0	101	71-125
2-Chlorotoluene	9.26	10.0	93	82-116
2-Hexanone	50.9	50.0	102	69-123
4-Chlorotoluene	9.12	10.0	91	79-115
4-Isopropyltoluene	9.40	10.0	94	77-119
4-Methyl-2-pentanone (MIBK)	52.6	50.0	105	71-128
Acetone	50.6	50.0	101	71-122
Benzene	9.83	10.0	98	83-123
Bromobenzene	10.5	10.0	105	85-117
Bromochloromethane	10.5	10.0	105	83-128
Bromodichloromethane	10.7	10.0	107	88-122
Bromoform	12.6	10.0	126	82-129
Bromomethane	10.2	10.0	102	75-146
Carbon Disulfide	18.0	20.0	90	62-116

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13  
 Sample Matrix: Water

Service Request: P0700256  
 Date Extracted: 03/21/2007  
 Date Analyzed: 03/21/2007

**Lab Control Spike Summary**  
**Volatile Organic Compounds**

Extraction Method: EPA 5030B  
 Analysis Method: 8260B

Units: ug/L  
 Basis: NA  
 Level: Low  
 Extraction Lot: PWG0700478

## Lab Control Sample

PWG0700478-3

## Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
Carbon Tetrachloride	12.3	10.0	123	80-125
Chlorobenzene	9.88	10.0	99	84-117
Chloroethane	9.96	10.0	100	75-133
Chloroform	10.2	10.0	102	88-120
Chloromethane	10.1	10.0	101	73-136
cis-1,2-Dichloroethene	10.1	10.0	101	83-125
cis-1,3-Dichloropropene	9.96	10.0	100	86-126
Dibromochloromethane	12.5	10.0	125 *	87-120
Dibromomethane	10.1	10.0	101	85-122
Dichlorodifluoromethane	15.7	10.0	157 *	43-151
F benzene	9.63	10.0	96	79-116
He chlorobutadiene	10.4	10.0	104	68-137
Isopropylbenzene	9.55	10.0	96	77-112
Total Xylenes	29.0	30.0	97	82-113
Methyl tert-Butyl Ether	19.6	20.0	98	83-127
Methylene Chloride	10.2	10.0	102	85-130
n-Butylbenzene	9.12	10.0	91	76-115
n-Propylbenzene	9.07	10.0	91	79-117
Naphthalene	10.3	10.0	103	62-135
sec-Butylbenzene	8.72	10.0	87	75-112
Styrene	9.19	10.0	92	84-119
tert-Butylbenzene	9.48	10.0	95	79-116
Tetrachloroethene (PCE)	9.67	10.0	97	76-123
Toluene	9.45	10.0	95	83-115
trans-1,2-Dichloroethene	9.47	10.0	95	78-124
trans-1,3-Dichloropropene	9.62	10.0	96	82-121
Trichloroethene (TCE)	9.82	10.0	98	78-120
Trichlorofluoromethane	9.76	10.0	98	45-158
Vinyl Acetate	19.4	20.0	97	64-163
Vinyl Chloride	9.30	10.0	93	68-139

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Ground water

**Service Request:** P0700256  
**Date Extracted:** 03/23/2007  
**Date Analyzed:** 03/23/2007

**Lab Control Spike/Duplicate Lab Control Spike Summary**  
**Volatile Organic Compounds**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L  
**Basis:** NA  
**Level:** Low  
**Extraction Lot:** PWG0700497

Analyte Name	Lab Control Sample PWG0700497-1			Duplicate Lab Control Sample PWG0700497-2			%Rec Limits	RPD	RPD Limit			
	Lab Control Spike			Duplicate Lab Control Spike								
	Result	Expected	%Rec	Result	Expected	%Rec						
1,1,1,2-Tetrachloroethane	11.2	10.0	112	10.8	10.0	108	88-118	4	25			
1,1,1-Trichloroethane (TCA)	10.7	10.0	107	10.3	10.0	103	83-120	4	25			
1,1,2,2-Tetrachloroethane	10.9	10.0	109	10.8	10.0	108	81-120	1	25			
1,1,2-Trichloroethane	11.1	10.0	111	11.0	10.0	110	86-118	1	25			
1,1,2-Trichlorotrifluoroethane	11.4	10.0	114	10.4	10.0	104	76-143	9	25			
1,1-Dichloroethane	10.8	10.0	108	10.4	10.0	104	82-123	3	25			
1,1-Dichloroethene	11.1	10.0	111	10.6	10.0	106	81-125	5	25			
1,1-Dichloropropene	9.47	10.0	95	9.00	10.0	90	71-113	5	25			
1,2,3-Trichlorobenzene	11.0	10.0	110	10.6	10.0	106	60-128	3	25			
1,2,3-Trichloropropane	11.0	10.0	110	10.7	10.0	107	78-119	2	25			
1,2,4-Trichlorobenzene	10.8	10.0	108	10.5	10.0	105	71-125	3	25			
1,2,4-Trimethylbenzene	10.9	10.0	109	10.8	10.0	108	87-115	1	25			
1,2-Dibromo-3-chloropropane	18.8	20.0	94	18.6	20.0	93	60-125	1	25			
1,2-Dibromoethane (EDB)	10.9	10.0	109	10.7	10.0	107	83-115	2	25			
1,2-Dichlorobenzene	10.8	10.0	108	10.5	10.0	105	88-117	3	25			
1,2-Dichloroethane (EDC)	10.8	10.0	108	10.5	10.0	105	84-125	3	25			
1,2-Dichloropropane	10.8	10.0	108	10.6	10.0	106	77-127	2	25			
1,3,5-Trimethylbenzene	10.6	10.0	106	10.6	10.0	106	85-115	1	25			
1,3-Dichlorobenzene	10.5	10.0	105	10.4	10.0	104	83-124	1	25			
1,3-Dichloropropane	10.7	10.0	107	10.7	10.0	107	83-114	0	25			
1,4-Dichlorobenzene	10.5	10.0	105	10.4	10.0	104	87-118	1	25			
2,2-Dichloropropane	9.95	10.0	100	9.59	10.0	96	85-129	4	25			
2-Butanone (MEK)	55.8	50.0	112	55.1	50.0	110	71-125	1	25			
2-Chlorotoluene	10.6	10.0	106	10.6	10.0	106	82-116	0	25			
2-Hexanone	59.1	50.0	118	59.0	50.0	118	69-123	0	25			
4-Chlorotoluene	10.3	10.0	103	10.3	10.0	103	79-115	0	25			
4-Isopropyltoluene	10.3	10.0	103	10.3	10.0	103	77-119	1	25			
4-Methyl-2-pentanone (MIBK)	58.4	50.0	117	57.5	50.0	115	71-128	1	25			
Acetone	51.9	50.0	104	51.2	50.0	102	71-122	1	25			
Benzene	10.7	10.0	107	10.3	10.0	103	83-123	3	25			
Bromobenzene	10.8	10.0	108	10.5	10.0	105	85-117	3	25			
Bromochloromethane	11.1	10.0	111	10.8	10.0	108	83-128	3	25			
Bromodichloromethane	10.8	10.0	108	10.5	10.0	105	88-122	2	25			
Bromoform	11.3	10.0	113	11.0	10.0	110	82-129	2	25			
Bromomethane	10.2	10.0	102	9.53	10.0	95	75-146	7	25			
Carbon Disulfide	20.3	20.0	101	19.1	20.0	95	62-116	6	25			

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Ground water

**Service Request:** P0700256  
**Date Extracted:** 03/23/2007  
**Date Analyzed:** 03/23/2007

**Lab Control Spike/Duplicate Lab Control Spike Summary**  
**Volatile Organic Compounds**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Units:** ug/L

**Basis:** NA

**Level:** Low

**Extraction Lot:** PWG0700497

Analyte Name	Lab Control Sample PWG0700497-1			Duplicate Lab Control Sample PWG0700497-2			%Rec Limits	RPD	RPD Limit			
	Lab Control Spike			Duplicate Lab Control Spike								
	Result	Expected	%Rec	Result	Expected	%Rec						
Carbon Tetrachloride	11.2	10.0	112	10.6	10.0	106	80-125	5	25			
Chlorobenzene	10.8	10.0	108	10.6	10.0	106	84-117	2	25			
Chloroethane	10.5	10.0	105	9.34	10.0	93	75-133	12	25			
Chloroform	10.9	10.0	109	10.6	10.0	106	88-120	2	25			
Chloromethane	9.96	10.0	100	9.15	10.0	92	73-136	8	25			
cis-1,2-Dichloroethene	10.9	10.0	109	10.6	10.0	106	83-125	3	25			
cis-1,3-Dichloropropene	11.6	10.0	116	11.3	10.0	113	86-126	3	25			
Dibromochloromethane	11.5	10.0	115	11.3	10.0	113	87-120	2	25			
Dibromomethane	10.8	10.0	108	10.6	10.0	106	85-122	2	25			
Dichlorodifluoromethane	10.2	10.0	102	9.35	10.0	94	43-151	9	25			
Ethylbenzene	10.6	10.0	106	10.5	10.0	105	79-116	1	25			
trans-1,3-Dihlorobutadiene	11.1	10.0	111	10.6	10.0	106	68-137	4	25			
Isopropylbenzene	10.4	10.0	104	10.2	10.0	102	77-112	2	25			
Total Xylenes	32.4	30.0	108	31.5	30.0	105	82-113	3	25			
Methyl tert-Butyl Ether	21.6	20.0	108	21.3	20.0	106	83-127	2	25			
Methylene Chloride	11.1	10.0	111	10.9	10.0	109	85-130	2	25			
n-Butylbenzene	10.1	10.0	101	9.93	10.0	99	76-115	2	25			
n-Propylbenzene	10.6	10.0	106	10.5	10.0	105	79-117	1	25			
Naphthalene	10.9	10.0	109	10.6	10.0	106	62-135	3	25			
sec-Butylbenzene	9.76	10.0	98	9.52	10.0	95	75-112	2	25			
Styrene	11.0	10.0	110	10.7	10.0	107	84-119	3	25			
tert-Butylbenzene	10.3	10.0	103	10.1	10.0	101	79-116	2	25			
Tetrachloroethene (PCE)	10.3	10.0	103	9.89	10.0	99	76-123	4	25			
Toluene	10.6	10.0	106	10.4	10.0	104	83-115	2	25			
trans-1,2-Dichloroethene	10.4	10.0	104	10.2	10.0	102	78-124	2	25			
trans-1,3-Dichloropropene	10.4	10.0	104	10.1	10.0	101	82-121	3	25			
Trichloroethene (TCE)	10.5	10.0	105	10.3	10.0	103	78-120	2	25			
Trichlorofluoromethane	10.9	10.0	109	10.7	10.0	107	45-158	2	25			
Vinyl Acetate	22.4	20.0	112	21.2	20.0	106	64-163	5	25			
Vinyl Chloride	10.2	10.0	102	9.69	10.0	97	68-139	5	25			

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded

**COLUMBIA ANALYTICAL SERVICES, INC.**

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Ground water

**Service Request:** P0700256  
**Date Extracted:** 03/21/2007  
**Date Analyzed:** 03/21/2007  
**Time Analyzed:** 08:46

**Method Blank Summary  
Volatile Organic Compounds**

**Sample Name:** Method Blank  
**Lab Code:** PWG0700476-3

**File ID:** J:\MS10\DATA\2007\_03\21\0321007.D  
**Instrument ID:** MS10

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Level:** Low  
**Extraction Lot:** PWG0700476

This Method Blank applies to the following analyses:

<b>Sample Name</b>	<b>Lab Code</b>	<b>File ID</b>	<b>Date Analyzed</b>	<b>Time Analyzed</b>
Lab Control Sample	PWG0700476-1	J:\MS10\DATA\2007_03\21\0321004.D	03/21/07	07:40
Duplicate Lab Control Sample	PWG0700476-2	J:\MS10\DATA\2007_03\21\0321005.D	03/21/07	08:02
TB-1	P0700256-001	J:\MS10\DATA\2007_03\21\0321012.D	03/21/07	10:38
TB-1	P0700256-007	J:\MS10\DATA\2007_03\21\0321013.D	03/21/07	11:00
CPT-35-50	P0700256-002	J:\MS10\DATA\2007_03\21\0321014.D	03/21/07	11:22
CPT-35-63	P0700256-003	J:\MS10\DATA\2007_03\21\0321015.D	03/21/07	11:44
CPT-35-75	P0700256-004	J:\MS10\DATA\2007_03\21\0321016.D	03/21/07	12:07
CPT-36-61	P0700256-006	J:\MS10\DATA\2007_03\21\0321017.D	03/21/07	12:29
CPT-38-62	P0700256-011	J:\MS10\DATA\2007_03\21\0321018.D	03/21/07	12:51

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Extracted:** 03/21/2007  
**Date Analyzed:** 03/21/2007  
**Time Analyzed:** 15:05

**Method Blank Summary**  
**Volatile Organic Compounds**

**Sample Name:** Method Blank  
**Lab Code:** PWG0700478-4

**File ID:** J:\MS10\DATA\2007\_03\21\0321023.D  
**Instrument ID:** MS10

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Level:** Low  
**Extraction Lot:** PWG0700478

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	PWG0700478-3	J:\MS10\DATA\2007_03\21\0321021.D	03/21/07	14:20
TB-1	P0700256-015	J:\MS10\DATA\2007_03\21\0321024.D	03/21/07	15:27
CPT-37-70	P0700256-009	J:\MS10\DATA\2007_03\21\0321025.D	03/21/07	15:49
CPT-37-70MS	PWG0700478-1	J:\MS10\DATA\2007_03\21\0321026.D	03/21/07	16:11
CPT-37-70DMS	PWG0700478-2	J:\MS10\DATA\2007_03\21\0321027.D	03/21/07	16:33
CPT-36-50	P0700256-005	J:\MS10\DATA\2007_03\21\0321029.D	03/21/07	17:18
CPT-37-54	P0700256-008	J:\MS10\DATA\2007_03\21\0321030.D	03/21/07	17:40
CPT-38-52	P0700256-010	J:\MS10\DATA\2007_03\21\0321031.D	03/21/07	18:02
CPT-34-54	P0700256-012	J:\MS10\DATA\2007_03\21\0321032.D	03/21/07	18:24
CP-^4-62	P0700256-013	J:\MS10\DATA\2007_03\21\0321033.D	03/21/07	18:47
C-^-73	P0700256-014	J:\MS10\DATA\2007_03\21\0321034.D	03/21/07	19:09
CPT-33-64	P0700256-017	J:\MS10\DATA\2007_03\21\0321035.D	03/21/07	19:31
CPT-31-77	P0700256-022	J:\MS10\DATA\2007_03\21\0321036.D	03/21/07	19:53
CPT-33-54	P0700256-016	J:\MS10\DATA\2007_03\21\0321037.D	03/21/07	20:15
CPT-32-66	P0700256-019	J:\MS10\DATA\2007_03\21\0321038.D	03/21/07	20:37
CPT-31-66	P0700256-021	J:\MS10\DATA\2007_03\21\0321039.D	03/21/07	21:00
CPT-32-54	P0700256-018	J:\MS10\DATA\2007_03\21\0321040.D	03/21/07	21:22
CPT-31-55	P0700256-020	J:\MS10\DATA\2007_03\21\0321041.D	03/21/07	21:44

**COLUMBIA ANALYTICAL SERVICES, INC.**

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Ground water

**Service Request:** P0700256  
**Date Extracted:** 03/23/2007  
**Date Analyzed:** 03/23/2007  
**Time Analyzed:** 18:37

**Method Blank Summary**  
**Volatile Organic Compounds**

**Sample Name:** Method Blank  
**Lab Code:** PWG0700497-3

**File ID:** J:\MS10\DATA\2007\_03\23\0323031.D  
**Instrument ID:** MS10

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Level:** Low  
**Extraction Lot:** PWG0700497

This Method Blank applies to the following analyses:

<b>Sample Name</b>	<b>Lab Code</b>	<b>File ID</b>	<b>Date Analyzed</b>	<b>Time Analyzed</b>
Lab Control Sample	PWG0700497-1	J:\MS10\DATA\2007_03\23\0323028.D	03/23/07	17:30
Duplicate Lab Control Sample	PWG0700497-2	J:\MS10\DATA\2007_03\23\0323029.D	03/23/07	17:53
CPT-36-50	P0700256-005	J:\MS10\DATA\2007_03\23\0323033.D	03/23/07	19:22

**COLUMBIA ANALYTICAL SERVICES, INC.**

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Ground water

**Service Request:** P0700256**Lab Control Sample/Duplicate Lab Control Sample Summary**  
**Volatile Organic Compounds**

<b>Sample Name:</b>	Lab Control Sample	<b>Sample Name:</b>	Duplicate Lab Control Sample
<b>Lab Code:</b>	PWG0700476-1	<b>Lab Code:</b>	PWG0700476-2
<b>File ID:</b>	J:\MS10\DATA\2007_03\21\0321004.D	<b>File ID:</b>	J:\MS10\DATA\2007_03\21\0321005.D
<b>Instrument ID:</b>	MS10	<b>Instrument ID:</b>	MS10
<b>Date Extracted:</b>	03/21/2007	<b>Date Extracted:</b>	03/21/2007
<b>Date Analyzed:</b>	03/21/2007	<b>Date Analyzed:</b>	03/21/2007
<b>Time Analyzed:</b>	07:40	<b>Time Analyzed:</b>	08:02

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Level:** Low  
**Extraction Lot:** PWG0700476

These Lab Control Samples apply to the following analyses:

<b>Sample Name</b>	<b>Lab Code</b>	<b>File ID</b>	<b>Date Analyzed</b>	<b>Time Analyzed</b>
Method Blank	PWG0700476-3	J:\MS10\DATA\2007_03\21\0321007.D	03/21/07	08:46
IB-1	P0700256-001	J:\MS10\DATA\2007_03\21\0321012.D	03/21/07	10:38
TB-1	P0700256-007	J:\MS10\DATA\2007_03\21\0321013.D	03/21/07	11:00
CPT-35-50	P0700256-002	J:\MS10\DATA\2007_03\21\0321014.D	03/21/07	11:22
CPT-35-63	P0700256-003	J:\MS10\DATA\2007_03\21\0321015.D	03/21/07	11:44
CPT-35-75	P0700256-004	J:\MS10\DATA\2007_03\21\0321016.D	03/21/07	12:07
C-5-61	P0700256-006	J:\MS10\DATA\2007_03\21\0321017.D	03/21/07	12:29
C-5-8-62	P0700256-011	J:\MS10\DATA\2007_03\21\0321018.D	03/21/07	12:51

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Extracted:** 03/21/2007  
**Date Analyzed:** 03/21/2007  
**Time Analyzed:** 14:20

**Lab Control Sample Summary**  
**Volatile Organic Compounds**

**Sample Name:** Lab Control Sample  
**Lab Code:** PWG0700478-3

**File ID:** J:\MS10\DATA\2007\_03\21\0321021.D  
**Instrument ID:** MS10

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Level:** Low  
**Extraction Lot:** PWG0700478

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	PWG0700478-4	J:\MS10\DATA\2007_03\21\0321023.D	03/21/07	15:05
TB-1	P0700256-015	J:\MS10\DATA\2007_03\21\0321024.D	03/21/07	15:27
CPT-37-70	P0700256-009	J:\MS10\DATA\2007_03\21\0321025.D	03/21/07	15:49
CPI-37-70MS	PWG0700478-1	J:\MS10\DATA\2007_03\21\0321026.D	03/21/07	16:11
CPT-37-70DMS	PWG0700478-2	J:\MS10\DATA\2007_03\21\0321027.D	03/21/07	16:33
CPT-36-50	P0700256-005	J:\MS10\DATA\2007_03\21\0321029.D	03/21/07	17:18
CPI-37-54	P0700256-008	J:\MS10\DATA\2007_03\21\0321030.D	03/21/07	17:40
CPI-38-52	P0700256-010	J:\MS10\DATA\2007_03\21\0321031.D	03/21/07	18:02
CPT-34-54	P0700256-012	J:\MS10\DATA\2007_03\21\0321032.D	03/21/07	18:24
CPT-34-62	P0700256-013	J:\MS10\DATA\2007_03\21\0321033.D	03/21/07	18:47
CPT-34-73	P0700256-014	J:\MS10\DATA\2007_03\21\0321034.D	03/21/07	19:09
CPT-33-64	P0700256-017	J:\MS10\DATA\2007_03\21\0321035.D	03/21/07	19:31
CPT-31-77	P0700256-022	J:\MS10\DATA\2007_03\21\0321036.D	03/21/07	19:53
CPT-33-54	P0700256-016	J:\MS10\DATA\2007_03\21\0321037.D	03/21/07	20:15
CPT-32-66	P0700256-019	J:\MS10\DATA\2007_03\21\0321038.D	03/21/07	20:37
CPT-31-66	P0700256-021	J:\MS10\DATA\2007_03\21\0321039.D	03/21/07	21:00
CPT-32-54	P0700256-018	J:\MS10\DATA\2007_03\21\0321040.D	03/21/07	21:22
CPT-31-55	P0700256-020	J:\MS10\DATA\2007_03\21\0321041.D	03/21/07	21:44

**COLUMBIA ANALYTICAL SERVICES, INC.**

## QA/QC Report

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Ground water

**Service Request:** P0700256**Lab Control Sample/Duplicate Lab Control Sample Summary  
Volatile Organic Compounds**

**Sample Name:** Lab Control Sample  
**Lab Code:** PWG0700497-1  
**File ID:** J:\MS10\DATA\2007\_03\23\0323028.D  
**Instrument ID:** MS10  
**Date Extracted:** 03/23/2007  
**Date Analyzed:** 03/23/2007  
**Time Analyzed:** 17:30

**Sample Name:** Duplicate Lab Control Sample  
**Lab Code:** PWG0700497-2  
**File ID:** J:\MS10\DATA\2007\_03\23\0323029.D  
**Instrument ID:** MS10  
**Date Extracted:** 03/23/2007  
**Date Analyzed:** 03/23/2007  
**Time Analyzed:** 17:53

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Level:** Low  
**Extraction Lot:** PWG0700497

These Lab Control Samples apply to the following analyses:

<b>Sample Name</b>	<b>Lab Code</b>	<b>File ID</b>	<b>Date Analyzed</b>	<b>Time Analyzed</b>
Method Blank	PWG0700497-3	J:\MS10\DATA\2007_03\23\0323031.D	03/23/07	18:37
CPI-36-50	P0700256-005	J:\MS10\DATA\2007_03\23\0323033.D	03/23/07	19:22

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13

**Service Request:** P0700256  
**Date Analyzed:** 03/21/2007  
**Time Analyzed:** 06:45

**Tune Summary**  
**Volatile Organic Compounds**

**File ID:** J:\MS10\DATA\2007\_03\21\0321002.D  
**Instrument ID:** MS10  
**Column:**

**Analysis Method:** 8260B  
**Analysis Lot:** PWG0700477

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	25.4	87069	PASS
75	95	30	60	50.3	172395	PASS
95	95	100	100	100.0	342848	PASS
96	95	5	9	6.8	23147	PASS
173	174	0	2	0.5	1107	PASS
174	95	50	100	61.3	210027	PASS
175	174	5	9	7.1	14842	PASS
176	174	95	101	97.0	203669	PASS
177	176	5	9	6.6	13419	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	PWG0700477-2	J:\MS10\DATA\2007_03\21\0321003.	03/21/2007	07:08	
Lab Control Sample	PWG0700476-1	J:\MS10\DATA\2007_03\21\0321004.	03/21/2007	07:40	
Duplicate Lab Control Sample	PWG0700476-2	J:\MS10\DATA\2007_03\21\0321005.	03/21/2007	08:02	
Method Blank	PWG0700476-3	J:\MS10\DATA\2007_03\21\0321007.	03/21/2007	08:46	
TB-1	P0700256-001	J:\MS10\DATA\2007_03\21\0321012	03/21/2007	10:38	
TB-1	P0700256-007	J:\MS10\DATA\2007_03\21\0321013	03/21/2007	11:00	
CPT-35-50	P0700256-002	J:\MS10\DATA\2007_03\21\0321014	03/21/2007	11:22	
CPT-35-63	P0700256-003	J:\MS10\DATA\2007_03\21\0321015	03/21/2007	11:44	
CPT-35-75	P0700256-004	J:\MS10\DATA\2007_03\21\0321016	03/21/2007	12:07	
CPT-36-61	P0700256-006	J:\MS10\DATA\2007_03\21\0321017	03/21/2007	12:29	
CPT-38-62	P0700256-011	J:\MS10\DATA\2007_03\21\0321018	03/21/2007	12:51	

Results flagged with an asterisk (\*) indicate the analysis performed outside specified tune window

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13

**Service Request:** P0700256  
**Date Analyzed:** 03/21/2007  
**Time Analyzed:** 13:37

**Tune Summary**  
**Volatile Organic Compounds**

**File ID:** J:\MS10\DATA\2007\_03\21\0321019.D**Analysis Method:** 8260B**Instrument ID:** MS10**Analysis Lot:** PWG0700479**Column:**

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	25.0	84877	PASS
75	95	30	60	50.2	170389	PASS
95	95	100	100	100.0	339200	PASS
96	95	5	9	6.7	22797	PASS
173	174	0	2	0.5	1087	PASS
174	95	50	100	62.7	212672	PASS
175	174	5	9	7.0	14983	PASS
176	174	95	101	96.0	204117	PASS
177	176	5	9	6.7	13613	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	PWG0700479-2	J:\MS10\DATA\2007_03\21\0321020.	03/21/2007	13:52	
I Control Sample	PWG0700478-3	J:\MS10\DATA\2007_03\21\0321021.	03/21/2007	14:20	
1 d Blank	PWG0700478-4	J:\MS10\DATA\2007_03\21\0321023.	03/21/2007	15:05	
TB-1	P0700256-015	J:\MS10\DATA\2007_03\21\0321024.	03/21/2007	15:27	
CPT-37-70	P0700256-009	J:\MS10\DATA\2007_03\21\0321025.	03/21/2007	15:49	
CPT-37-70MS	PWG0700478-1	J:\MS10\DATA\2007_03\21\0321026.	03/21/2007	16:11	
CPT-37-70DMS	PWG0700478-2	J:\MS10\DATA\2007_03\21\0321027.	03/21/2007	16:33	
CPT-36-50	P0700256-005	J:\MS10\DATA\2007_03\21\0321029.	03/21/2007	17:18	
CPT-37-54	P0700256-008	J:\MS10\DATA\2007_03\21\0321030.	03/21/2007	17:40	
CPT-38-52	P0700256-010	J:\MS10\DATA\2007_03\21\0321031	03/21/2007	18:02	
CPT-34-54	P0700256-012	J:\MS10\DATA\2007_03\21\0321032.	03/21/2007	18:24	
CPT-34-62	P0700256-013	J:\MS10\DATA\2007_03\21\0321033.	03/21/2007	18:47	
CPT-34-73	P0700256-014	J:\MS10\DATA\2007_03\21\0321034.	03/21/2007	19:09	
CPT-33-64	P0700256-017	J:\MS10\DATA\2007_03\21\0321035	03/21/2007	19:31	
CPT-31-77	P0700256-022	J:\MS10\DATA\2007_03\21\0321036.	03/21/2007	19:53	
CPT-33-54	P0700256-016	J:\MS10\DATA\2007_03\21\0321037.	03/21/2007	20:15	
CPT-32-66	P0700256-019	J:\MS10\DATA\2007_03\21\0321038.	03/21/2007	20:37	
CPT-31-66	P0700256-021	J:\MS10\DATA\2007_03\21\0321039.	03/21/2007	21:00	
CPT-32-54	P0700256-018	J:\MS10\DATA\2007_03\21\0321040.	03/21/2007	21:22	
CPT-31-55	P0700256-020	J:\MS10\DATA\2007_03\21\0321041.	03/21/2007	21:44	

R: Jagged with an asterisk (\*) indicate the analysis performed outside specified tune window

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13

**Service Request:** P0700256  
**Date Analyzed:** 03/23/2007  
**Time Analyzed:** 11:09

**Tune Summary**  
**Volatile Organic Compounds**

**File ID:** J:\MS10\DATA\2007\_03\23\0323011.D  
**Instrument ID:** MS10  
**Column:**

**Analysis Method:** 8260B  
**Analysis Lot:** PWG0700498

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	23.8	94229	PASS
75	95	30	60	49.3	195221	PASS
95	95	100	100	100.0	396096	PASS
96	95	5	9	6.7	26632	PASS
173	174	0	2	0.6	1418	PASS
174	95	50	100	63.5	251349	PASS
175	174	5	9	7.1	17847	PASS
176	174	95	101	97.5	244949	PASS
177	176	5	9	6.5	15999	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	PWG0700498-2	J:\MS10\DATA\2007_03\23\0323027	03/23/2007	17:08	
Lab Control Sample	PWG0700497-1	J:\MS10\DATA\2007_03\23\0323028	03/23/2007	17:30	
Duplicate Lab Control Sample	PWG0700497-2	J:\MS10\DATA\2007_03\23\0323029	03/23/2007	17:53	
Method Blank	PWG0700497-3	J:\MS10\DATA\2007_03\23\0323031	03/23/2007	18:37	
CPT-36-50	P0700256-005	J:\MS10\DATA\2007_03\23\0323033	03/23/2007	19:22	

Results flagged with an asterisk (\*) indicate the analysis performed outside specified tune window

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13

**Service Request:** P0700256  
**ICAL Date:** 03/19/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

**ICAL ID:** CAL1262

**Column:** MS

**Instrument ID:** MS10

Level ID	File ID	Level ID	File ID
A	J:\MS10\DATA\2007_03\19\0319007.D	F	J:\MS10\DATA\2007_03\19\0319013.D
B	J:\MS10\DATA\2007_03\19\0319008.D	G	J:\MS10\DATA\2007_03\19\0319014.D
C	J:\MS10\DATA\2007_03\19\0319009.D	H	J:\MS10\DATA\2007_03\19\0319015.D
D	J:\MS10\DATA\2007_03\19\0319010.D	I	J:\MS10\DATA\2007_03\19\0319019.D
E	J:\MS10\DATA\2007_03\19\0319012.D		

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
1,1,1,2-Tetrachloroethane	A	0.50	0.192	B	1.0	0.195	C	2.0	0.217	D	5.0	0.225	E	20	0.273
										I	10	0.253			
1,1,1-Trichloroethane (TCA)	A	0.50	0.287	B	1.0	0.283	C	2.0	0.293	D	5.0	0.293	E	20	0.312
	F	50	0.314	G	100	0.341	H	200	0.344	I	10	0.287			
† 1,1,2,2-Tetrachloroethane	A	0.50	1.26	B	1.0	1.24	C	2.0	1.38	D	5.0	1.31	E	20	1.37
	F	50	1.38	G	100	1.45	H	200	1.25	I	10	1.19			
1,1,2-Trichloroethane	A	0.50	0.341	B	1.0	0.339	C	2.0	0.366	D	5.0	0.359	E	20	0.360
	F	50	0.364	G	100	0.367	H	200	0.374	I	10	0.321			
1,1,2-Trichlorotrifluoroethane	A	0.50	0.112	B	1.0	0.105	C	2.0	0.105	D	5.0	0.114	E	20	0.122
	F	50	0.113	G	100	0.130	H	200	0.128	I	10	0.116			
† 1,1-Dichloroethane	A	0.50	0.623	B	1.0	0.623	C	2.0	0.653	D	5.0	0.627	E	20	0.632
	F	50	0.636	G	100	0.667	H	200	0.685	I	10	0.554			
† 1,1-Dichloroethene	A	0.50	0.215	B	1.0	0.203	C	2.0	0.208	D	5.0	0.207	E	20	0.214
	F	50	0.204	G	100	0.219	H	200	0.218	I	10	0.195			
1,1-Dichloropropene	A	0.50	0.394	B	1.0	0.386	C	2.0	0.402	D	5.0	0.398	E	20	0.405
	F	50	0.401	G	100	0.427	H	200	0.431	I	10	0.365			
1,2,3-Trichlorobenzene	A	0.50	0.885	B	1.0	0.907	C	2.0	0.924	D	5.0	0.910	E	20	0.897
	F	50	0.916	G	100	0.994	H	200	1.04	I	10	0.944			
1,2,3-Trichloropropane	A	0.50	0.336	B	1.0	0.305	C	2.0	0.349	D	5.0	0.339	E	20	0.349
	F	50	0.354	G	100	0.373	H	200	0.326	I	10	0.307			
1,2,4-Trichlorobenzene	A	0.50	1.04	B	1.0	0.921	C	2.0	0.981	D	5.0	0.986	E	20	0.996
	F	50	1.05	G	100	1.13	H	200	1.18	I	10	1.02			
1,2,4-Trimethylbenzene	A	0.50	3.61	B	1.0	3.43	C	2.0	3.72	D	5.0	3.69	E	20	3.60
	F	50	3.64	G	100	3.79	H	200	3.63	I	10	3.40			
1,2-Dibromo-3-chloropropane				B	2.0	0.172	C	4.0	0.171	D	10	0.171	E	40	0.214
				F	100	0.228				I	20	0.188			
1,2-Dibromoethane (EDB)	A	0.50	0.328	B	1.0	0.332	C	2.0	0.342	D	5.0	0.351	E	20	0.373
	F	50	0.379	G	100	0.386	H	200	0.390	I	10	0.331			

Flagged with an asterisk (\*) indicate values outside control criteria.

† SPC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/19/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

ICAL ID: CAL1262  
 Instrument ID: MS10

Column: MS

Analyte Name	Level A			Level B			Level C			Level D			Level E		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
1,2-Dichlorobenzene	A	0.50	1.63	B	1.0	1.55	C	2.0	1.73	D	5.0	1.62	E	20	1.65
	F	50	1.70	G	100	1.77	H	200	1.78	I	10	1.57			
1,2-Dichloroethane (EDC)	A	0.50	0.444	B	1.0	0.447	C	2.0	0.482	D	5.0	0.453	E	20	0.481
	F	50	0.494	G	100	0.522	H	200	0.524	I	10	0.413			
† 1,2-Dichloropropane	A	0.50	0.362	B	1.0	0.374	C	2.0	0.390	D	5.0	0.376	E	20	0.386
	F	50	0.389	G	100	0.403	H	200	0.408	I	10	0.327			
1,3,5-Trimethylbenzene	A	0.50	3.51	B	1.0	3.37	C	2.0	3.65	D	5.0	3.67	E	20	3.50
	F	50	3.53	G	100	3.69	H	200	3.51	I	10	3.33			
1,3-Dichlorobenzene	A	0.50	1.75	B	1.0	1.64	C	2.0	1.76	D	5.0	1.71	E	20	1.71
	F	50	1.76	G	100	1.84	H	200	1.84	I	10	1.63			
1,3-Dichloropropane	A	0.50	0.779	B	1.0	0.767	C	2.0	0.819	D	5.0	0.786	E	20	0.799
	F	50	0.803	G	100	0.811	H	200	0.816	I	10	0.697			
1,4-Dichlorobenzene	A	0.50	1.83	B	1.0	1.73	C	2.0	1.80	D	5.0	1.76	E	20	1.74
	F	50	1.80	G	100	1.87	H	200	1.87	I	10	1.66			
2,2-Dichloropropane	A	0.50	0.310	B	1.0	0.284	C	2.0	0.293	D	5.0	0.287	E	20	0.304
	F	50	0.299	G	100	0.312	H	200	0.298	I	10	0.274			
2-Butanone (MEK)	A	2.5	0.215	B	5.0	0.205	C	10	0.215	D	25	0.200	E	100	0.224
	F	250	0.224	G	500	0.230	H	1000	0.230	I	50	0.182			
2-Chlorotoluene	A	0.50	3.96	B	1.0	3.72	C	2.0	3.96	D	5.0	3.83	E	20	3.64
	F	50	3.63	G	100	3.74	H	200	3.66	I	10	3.40			
2-Hexanone	A	2.5	0.458	B	5.0	0.429	C	10	0.477	D	25	0.486	E	100	0.528
	F	250	0.525	G	500	0.531	H	1000	0.481	I	50	0.441			
4-Chlorotoluene	A	0.50	3.63	B	1.0	3.47	C	2.0	3.64	D	5.0	3.56	E	20	3.39
	F	50	3.41	G	100	3.48	H	200	3.43	I	10	3.17			
4-Isopropyltoluene	A	0.50	3.18	B	1.0	3.16	C	2.0	3.40	D	5.0	3.41	E	20	3.37
	F	50	3.37	G	100	3.60	H	200	3.43	I	10	3.28			
4-Methyl-2-pentanone (MIBK)	A	2.5	0.436	B	5.0	0.431	C	10	0.468	D	25	0.466	E	100	0.512
	F	250	0.519	G	500	0.529	H	1000	0.467	I	50	0.406			
Acetone				B	5.0	0.149	C	10	0.137	D	25	0.123	E	100	0.128
	F	250	0.124	G	500	0.126	H	1000	0.125	I	50	0.111			
Benzene	A	0.50	1.33	B	1.0	1.27	C	2.0	1.34	D	5.0	1.31	E	20	1.32
	F	50	1.31	G	100	1.34	H	200	1.35	I	10	1.14			
Bromobenzene	A	0.50	0.373	B	1.0	0.366	C	2.0	0.379	D	5.0	0.371	E	20	0.401
	F	50	0.429	G	100	0.461	H	200	0.439	I	10	0.372			

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/19/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

ICAL ID: CAL1262  
 Instrument ID: MS10

Column: MS

Analyte Name	Level	ID	Amt	RRF	Level	ID	Amt	RRF	Level	ID	Amt	RRF	Level	ID	Amt	RRF
Bromochloromethane	A	0.50	0.120		B	1.0	0.122		C	2.0	0.132		D	5.0	0.121	
	F	50	0.133		G	100	0.137		H	200	0.141		I	10	0.115	
Bromodichloromethane	A	0.50	0.290		B	1.0	0.279		C	2.0	0.297		D	5.0	0.294	
	F	50	0.357		G	100	0.383		H	200	0.403		I	10	0.286	
Bromoform					B	1.0	0.0828		C	2.0	0.0954		D	5.0	0.101	
					F	50	0.169		G	100	0.198		I	10	0.123	
Bromomethane					B	1.0	0.239		C	2.0	0.210		D	5.0	0.144	
					F	50	0.110						I	10	0.115	
Carbon Disulfide	A	1.0	0.873		B	2.0	0.838		C	4.0	0.871		D	10	0.848	
	F	100	0.823		G	200	0.874		H	400	0.851		I	20	0.771	
Carbon Tetrachloride	A	0.50	0.163		B	1.0	0.155		C	2.0	0.168		D	5.0	0.169	
	F	50	0.217										I	10	0.192	
Chlorobenzene	A	0.50	1.10		B	1.0	1.09		C	2.0	1.12		D	5.0	1.09	
	F	50	1.11		G	100	1.14		H	200	1.16		I	10	1.01	
Chloroethane					B	1.0	0.184		C	2.0	0.180		D	5.0	0.160	
					F	50	0.130						I	10	0.124	
Chloroform	A	0.50	0.476		B	1.0	0.470		C	2.0	0.495		D	5.0	0.484	
	F	50	0.491		G	100	0.509		H	200	0.520		I	10	0.433	
Chloromethane	A	0.50	0.437		B	1.0	0.441		C	2.0	0.424		D	5.0	0.374	
	F	50	0.332		G	100	0.336						I	10	0.294	
cis-1,2-Dichloroethene	A	0.50	0.309		B	1.0	0.285		C	2.0	0.318		D	5.0	0.309	
	F	50	0.314		G	100	0.324		H	200	0.331		I	10	0.274	
cis-1,3-Dichloropropene	A	0.50	0.421		B	1.0	0.420		C	2.0	0.450		D	5.0	0.468	
	F	50	0.543		G	100	0.576						I	10	0.434	
Dibromochloromethane					B	1.0	0.205		C	2.0	0.221		D	5.0	0.216	
													I	10	0.239	
Dibromomethane	A	0.50	0.175		B	1.0	0.176		C	2.0	0.191		D	5.0	0.178	
	F	50	0.193		G	100	0.200		H	200	0.203		I	10	0.164	
Dichlorodifluoromethane	A	0.50	0.157		B	1.0	0.152		C	2.0	0.157		D	5.0	0.175	
	F	50	0.137		G	100	0.162		H	200	0.157		I	10	0.154	
Ethylbenzene	A	0.50	0.558		B	1.0	0.571		C	2.0	0.612		D	5.0	0.615	
	F	50	0.641		G	100	0.679		H	200	0.672		I	10	0.560	
Hexachlorobutadiene	A	0.50	0.426		B	1.0	0.437		C	2.0	0.413		D	5.0	0.431	
	F	50	0.378		G	100	0.419		H	200	0.434		I	10	0.448	

Results flagged with an asterisk (\*) indicate values outside control criteria.

† Spec Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/19/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

ICAL ID: CAL1262  
 Instrument ID: MS10

Column: MS

Analyte Name	Level A			Level B			Level C			Level D			Level E		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Isopropylbenzene	A	0.50	1.78	B	1.0	1.69	C	2.0	1.83	D	5.0	1.80	E	20	1.85
	F	50	1.84	G	100	1.94	H	200	1.90	I	10	1.74			
m,p-Xylenes	A	1.0	0.711	B	2.0	0.713	C	4.0	0.751	D	10	0.761	E	40	0.775
	F	100	0.807	G	200	0.857	H	400	0.712	I	20	0.696			
o-Xylene	A	0.50	0.721	B	1.0	0.688	C	2.0	0.727	D	5.0	0.735	E	20	0.758
	F	50	0.778	G	100	0.823	H	200	0.814	I	10	0.696			
Methyl tert-Butyl Ether	A	1.0	0.953	B	2.0	0.948	C	4.0	1.00	D	10	0.969	E	40	1.02
	F	100	1.03	G	200	1.07	H	400	1.10	I	20	0.873			
Methylene Chloride	A	0.50	0.307	B	1.0	0.310	C	2.0	0.331	D	5.0	0.315	E	20	0.317
	F	50	0.311	G	100	0.315	H	200	0.316	I	10	0.277			
n-Butylbenzene	A	0.50	3.85	B	1.0	3.79	C	2.0	3.89	D	5.0	3.94	E	20	3.88
	F	50	3.85	G	100	4.03	H	200	3.79	I	10	3.77			
n-Propylbenzene	A	0.50	5.59	B	1.0	5.65	C	2.0	6.04	D	5.0	6.03	E	20	5.85
	F	50	6.04	G	100	6.31	H	200	4.24	I	10	5.40			
Naphthalene	A	0.50	2.87	B	1.0	2.68	C	2.0	2.87	D	5.0	2.82	E	20	2.87
	F	50	3.08	G	100	3.24	H	200	3.24	I	10	2.84			
sec-Butylbenzene	A	0.50	4.32	B	1.0	4.20	C	2.0	4.41	D	5.0	4.44	E	20	4.25
	F	50	4.17	G	100	4.38	H	200	4.10	I	10	4.15			
Styrene	A	0.50	1.06	B	1.0	1.06	C	2.0	1.21	D	5.0	1.22	E	20	1.31
	F	50	1.35	G	100	1.43	H	200	1.40	I	10	1.15			
tert-Butylbenzene	A	0.50	2.55	B	1.0	2.55	C	2.0	2.65	D	5.0	2.71	E	20	2.56
	F	50	2.61	G	100	2.73	H	200	2.67	I	10	2.53			
Tetrachloroethene (PCE)	A	0.50	0.245	B	1.0	0.215	C	2.0	0.236	D	5.0	0.239	E	20	0.236
	F	50	0.239	G	100	0.257	H	200	0.268	I	10	0.229			
Toluene	A	0.50	1.04	B	1.0	1.01	C	2.0	1.11	D	5.0	1.11	E	20	1.09
	F	50	1.10	G	100	1.13	H	200	1.16	I	10	0.986			
trans-1,2-Dichloroethene	A	0.50	0.275	B	1.0	0.260	C	2.0	0.270	D	5.0	0.267	E	20	0.272
	F	50	0.269	G	100	0.281	H	200	0.290	I	10	0.243			
trans-1,3-Dichloropropene	A	0.50	0.535	B	1.0	0.524	C	2.0	0.581	D	5.0	0.591	E	20	0.671
	F	50	0.707	G	100	0.742				I	10	0.585			
Trichloroethene (TCE)	A	0.50	0.267	B	1.0	0.265	C	2.0	0.266	D	5.0	0.272	E	20	0.271
	F	50	0.270	G	100	0.284	H	200	0.291	I	10	0.244			
Trichlorofluoromethane	A	0.50	0.218	B	1.0	0.236	C	2.0	0.233	D	5.0	0.240	E	20	0.268
	F	50	0.235	G	100	0.268	H	200	0.254	I	10	0.223			

Results flagged with an asterisk (\*) indicate values outside control criteria

† SPCC Compound

‡ CCC Compound

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/19/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

ICAL ID: CAL1262  
 Instrument ID: MS10

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Vinyl Acetate				B	2.0	0.553	C	4.0	0.604	D	10	0.599	E	40	0.711
	F	100	0.736	G	200	0.731	H	400	0.731	I	20	0.513			
† Vinyl Chloride	A	0.50	0.372	B	1.0	0.349	C	2.0	0.356	D	5.0	0.335	E	20	0.313
	F	50	0.271	G	100	0.274				I	10	0.248			
Dibromofluoromethane	A	1.0	0.176	B	2.0	0.192	C	4.0	0.233	D	5.0	0.213	E	20	0.223
	F	30	0.229							I	10	0.202			
Toluene-d8	A	1.0	1.10	B	2.0	1.19	C	4.0	1.40	D	5.0	1.31	E	20	1.31
	F	30	1.34							I	10	1.25			
4-Bromofluorobenzene	A	1.0	0.468	B	2.0	0.505	C	4.0	0.584	D	5.0	0.548	E	20	0.561
	F	30	0.567							I	10	0.510			

Re. Logged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/19/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

ICAL ID: CAL1262  
 Instrument ID: MS10

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
1,1,1,2-Tetrachloroethane	TRG	AverageRF	% RSD	14.2		≤ 15	0.226		
1,1,1-Trichloroethane (TCA)	MS	AverageRF	% RSD	7.6		≤ 15	0.306		
† 1,1,2,2-Tetrachloroethane	TRG	AverageRF	% RSD	6.5		≤ 15	1.31	.3	
1,1,2-Trichloroethane	TRG	AverageRF	% RSD	4.9		≤ 15	0.354		
1,1,2-Trichlorotrifluoroethane	IRG	AverageRF	% RSD	7.8		≤ 15	0.116		
† 1,1-Dichloroethane	MS	AverageRF	% RSD	5.8		≤ 15	0.633	.1	
‡ 1,1-Dichloroethene	MS	AverageRF	% RSD	3.8		≤ 30	0.209		
1,1-Dichloropropene	IRG	AverageRF	% RSD	5.0		≤ 15	0.401		
1,2,3-Trichlorobenzene	IRG	AverageRF	% RSD	5.3		≤ 15	0.935		
1,2,3-Trichloropropane	IRG	AverageRF	% RSD	6.5		≤ 15	0.338		
1,2,4-Trichlorobenzene	IRG	AverageRF	% RSD	7.7		≤ 15	1.03		
1,2,4-Trimethylbenzene	IRG	AverageRF	% RSD	3.5		≤ 15	3.61		
1,2-Dibromo-3-chloropropane	IRG	AverageRF	% RSD	12.9		≤ 15	0.190		
1,2-Dibromoethane (EDB)	IRG	AverageRF	% RSD	7.0		≤ 15	0.357		
1,2-Dichlorobenzene	IRG	AverageRF	% RSD	4.9		≤ 15	1.67		
1,2-Dichloroethane (EDC)	MS	AverageRF	% RSD	7.8		≤ 15	0.473		
† 1,2-Dichloropropane	MS	AverageRF	% RSD	6.4		≤ 30	0.379		
1,3,5-Trimethylbenzene	MS	AverageRF	% RSD	3.6		≤ 15	3.53		
1,3-Dichlorobenzene	MS	AverageRF	% RSD	4.3		≤ 15	1.74		
1,3-Dichloropropane	IRG	AverageRF	% RSD	4.8		≤ 15	0.786		
1,4-Dichlorobenzene	IRG	AverageRF	% RSD	3.9		≤ 15	1.79		
2,2-Dichloropropane	IRG	AverageRF	% RSD	4.2		≤ 15	0.296		
2-Butanone (MEK)	IRG	AverageRF	% RSD	7.5		≤ 15	0.214		
2-Chlorotoluene	IRG	AverageRF	% RSD	4.8		≤ 15	3.72		
2-Hexanone	TRG	AverageRF	% RSD	7.8		≤ 15	0.484		
4-Chlorotoluene	IRG	AverageRF	% RSD	4.1		≤ 15	3.47		
4-Isopropyltoluene	IRG	AverageRF	% RSD	4.0		≤ 15	3.35		
4-Methyl-2-pentanone (MIBK)	IRG	AverageRF	% RSD	9.0		≤ 15	0.471		
Acetone	IRG	AverageRF	% RSD	8.7		≤ 15	0.128		
Benzene	MS	AverageRF	% RSD	5.0		≤ 15	1.30		
Bromobenzene	IRG	AverageRF	% RSD	8.9		≤ 15	0.399		
Bromochloromethane	IRG	AverageRF	% RSD	6.9		≤ 15	0.128		
Bromodichloromethane	IRG	AverageRF	% RSD	14.3		≤ 15	0.325		
† Bromoform	IRG	AverageRF	% RSD	32.3	*	≤ 15	0.130	.1	
Bromomethane	IRG	Quadratic	COD	0.996		≥ 0.99	0.159		
Carbon Disulfide	TRG	AverageRF	% RSD	3.9		≤ 15	0.845		
Carbon Tetrachloride	IRG	AverageRF	% RSD	12.4		≤ 15	0.180	.3	
† Chlorobenzene	MS	AverageRF	% RSD	3.6		≤ 15	1.10		
Chloroethane	IRG	Quadratic	COD	0.997		≥ 0.99	0.155		
‡ Chloroform	MS	AverageRF	% RSD	5.1		≤ 30	0.486		
† Chloromethane	IRG	AverageRF	% RSD	14.4		≤ 15	0.376	.1	
cis-1,2-Dichloroethene	IRG	AverageRF	% RSD	5.9		≤ 15	0.309		

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound  
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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/19/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

ICAL ID: CAL1262  
 Instrument ID: MS10

Column: MS

Analyte Name	Compound Type	Calibration Evaluation				RRF Evaluation		
		Fit Type	Eval.	Result	Q	Control Criteria	Average RRF	Q
cis-1,3-Dichloropropene	TRG	AverageRF	% RSD	12.5		≤ 15	0.479	
Dibromochloromethane	IRG	AverageRF	% RSD	11.1		≤ 15	0.230	
Dibromomethane	TRG	AverageRF	% RSD	7.0		≤ 15	0.186	
Dichlorodifluoromethane	TRG	AverageRF	% RSD	6.5		≤ 15	0.157	
Ethylbenzene	MS	AverageRF	% RSD	7.4		≤ 15	0.615	
Hexachlorobutadiene	TRG	AverageRF	% RSD	5.4		≤ 15	0.420	
Isopropylbenzene	TRG	AverageRF	% RSD	4.2		≤ 15	1.82	
m,p-Xylenes	TRG	AverageRF	% RSD	7.0		≤ 15	0.754	
o-Xylene	IRG	AverageRF	% RSD	6.4		≤ 15	0.749	
Methyl tert-Butyl Ether	MS	AverageRF	% RSD	6.8		≤ 15	0.996	
Methylene Chloride	TRG	AverageRF	% RSD	4.6		≤ 15	0.311	
n-Butylbenzene	TRG	AverageRF	% RSD	2.1		≤ 15	3.87	
n-Propylbenzene	TRG	AverageRF	% RSD	10.7		≤ 15	5.68	
Naphthalene	TRG	AverageRF	% RSD	6.6		≤ 15	2.96	
sec-Butylbenzene	TRG	AverageRF	% RSD	2.9		≤ 15	4.27	
Styrene	TRG	AverageRF	% RSD	11.0		≤ 15	1.24	
tert-Butylbenzene	TRG	AverageRF	% RSD	2.9		≤ 15	2.62	
chloroethene (PCE)	MS	AverageRF	% RSD	6.3		≤ 15	0.240	
ene	MS	AverageRF	% RSD	5.3		≤ 30	1.08	
trans-1,2-Dichloroethene	TRG	AverageRF	% RSD	4.9		≤ 15	0.270	
trans-1,3-Dichloropropene	TRG	AverageRF	% RSD	13.0		≤ 15	0.617	
Trichloroethene (TCE)	MS	AverageRF	% RSD	4.8		≤ 15	0.270	
Trichlorofluoromethane	TRG	AverageRF	% RSD	7.4		≤ 15	0.242	
Vinyl Acetate	TRG	AverageRF	% RSD	13.9		≤ 15	0.647	
Vinyl Chloride	MS	AverageRF	% RSD	14.6		≤ 30	0.315	
Dibromofluoromethane	SURR	AverageRF	% RSD	9.8		≤ 15	0.209	
Toluene-d8	SURR	AverageRF	% RSD	8.0		≤ 15	1.27	
4-Bromofluorobenzene	SURR	AverageRF	% RSD	7.7		≤ 15	0.535	

R : flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/19/2007  
 Date Analyzed: 03/19/2007

**Second Source Calibration Verification**  
**Volatile Organic Compounds**

ICAL Type: Internal Standard  
 Analysis Method: 8260B

ICAL ID: CAL1262  
 Units: ug/L

File ID: J:\MS10\DATA\2007\_03\19\0319020.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	10	12	0.226	0.274	21	NA	± 30 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	9.6	0.306	0.293	-4	NA	± 30 %	AverageRF
† 1,1,2,2-Tetrachloroethane	10	10	1.31	1.33	1	NA	± 30 %	AverageRF
1,1,2-Trichloroethane	10	10	0.354	0.362	2	NA	± 30 %	AverageRF
1,1,2-Trichlorotrifluoroethane	10	9.8	0.116	0.113	-3	NA	± 30 %	AverageRF
† 1,1-Dichloroethane	10	9.6	0.633	0.608	-4	NA	± 30 %	AverageRF
† 1,1-Dichloroethene	10	9.4	0.209	0.196	-6	NA	± 30 %	AverageRF
1,1-Dichloropropene	10	8.2	0.401	0.329	-18	NA	± 30 %	AverageRF
1,2,3-Trichlorobenzene	10	10	0.935	0.979	5	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	10	9.7	0.338	0.326	-3	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	10	1.03	1.05	1	NA	± 30 %	AverageRF
1,2,4-Trimethylbenzene	10	9.8	3.61	3.53	-2	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane	20	21	0.190	0.199	5	NA	± 30 %	AverageRF
1,2-Dibromoethane (EDB)	10	10	0.357	0.360	1	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	10	10	1.67	1.68	1	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	9.8	0.473	0.465	-2	NA	± 30 %	AverageRF
† 1,2-Dichloropropane	10	10	0.379	0.381	0	NA	± 30 %	AverageRF
1,3,5-Trimethylbenzene	10	9.6	3.53	3.37	-4	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	10	9.8	1.74	1.71	-2	NA	± 30 %	AverageRF
1,3-Dichloropropane	10	9.8	0.786	0.772	-2	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	9.9	1.79	1.77	-1	NA	± 30 %	AverageRF
2,2-Dichloropropane	10	8.7	0.296	0.258	-13	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	53	0.214	0.226	6	NA	± 30 %	AverageRF
2-Chlorotoluene	10	9.6	3.72	3.57	-4	NA	± 30 %	AverageRF
2-Hexanone	50	54	0.484	0.524	8	NA	± 30 %	AverageRF
4-Chlorotoluene	10	9.5	3.47	3.28	-5	NA	± 30 %	AverageRF
4-Isopropyltoluene	10	9.4	3.35	3.15	-6	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	50	55	0.471	0.517	10	NA	± 30 %	AverageRF
Acetone	50	53	0.128	0.136	6	NA	± 30 %	AverageRF
Benzene	10	9.7	1.30	1.25	-3	NA	± 30 %	AverageRF
Bromobenzene	10	9.8	0.399	0.392	-2	NA	± 30 %	AverageRF
Bromochloromethane	10	10	0.128	0.130	1	NA	± 30 %	AverageRF
Bromodichloromethane	10	10	0.325	0.330	2	NA	± 30 %	AverageRF
Bromoform	10	11	0.130	0.137	5	NA	± 30 %	AverageRF
Bromomethane	10	9.6	0.159	0.134	NA	-4	± 30 %	Quadratic
Carbon Disulfide	20	17	0.845	0.729	-14	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	10	0.180	0.189	5	NA	± 30 %	AverageRF
Chlorobenzene	10	9.8	1.10	1.08	-2	NA	± 30 %	AverageRF
Chloroethane	10	9.6	0.155	0.144	NA	-4	± 30 %	Quadratic
Chloroform	10	10	0.486	0.488	0	NA	± 30 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/19/2007  
 Date Analyzed: 03/19/2007

**Second Source Calibration Verification**  
**Volatile Organic Compounds**

ICAL Type: Internal Standard  
 Analysis Method: 8260B

ICAL ID: CAL1262  
 Units: ug/L

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Chloromethane	10	10	0.376	0.387	3	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	9.8	0.309	0.302	-2	NA	± 30 %	AverageRF
cis-1,3-Dichloropropene	10	10	0.479	0.482	1	NA	± 30 %	AverageRF
Dibromochloromethane	10	11	0.230	0.262	14	NA	± 30 %	AverageRF
Dibromomethane	10	10	0.186	0.188	1	NA	± 30 %	AverageRF
Dichlorodifluoromethane	10	15	0.157	0.232	47 *	NA	± 30 %	AverageRF
Ethylbenzene	10	9.5	0.615	0.584	-5	NA	± 30 %	AverageRF
Hexachlorobutadiene	10	10	0.420	0.418	0	NA	± 30 %	AverageRF
Isopropylbenzene	10	9.2	1.82	1.68	-8	NA	± 30 %	AverageRF
m,p-Xylenes	20	19	0.754	0.721	-4	NA	± 30 %	AverageRF
o-Xylene	10	9.7	0.749	0.723	-3	NA	± 30 %	AverageRF
Methyl tert-Butyl Ether	20	20	0.996	0.993	0	NA	± 30 %	AverageRF
Methylene Chloride	10	10	0.311	0.320	3	NA	± 30 %	AverageRF
n-Butylbenzene	10	9.0	3.87	3.50	-10	NA	± 30 %	AverageRF
n-Propylbenzene	10	9.4	5.68	5.34	-6	NA	± 30 %	AverageRF
Naphthalene	10	10	2.96	3.05	3	NA	± 30 %	AverageRF
s -t ylbenzene	10	8.7	4.27	3.70	-13	NA	± 30 %	AverageRF
St ylne	10	9.2	1.24	1.15	-8	NA	± 30 %	AverageRF
tert-Butylbenzene	10	9.6	2.62	2.51	-4	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	9.1	0.240	0.218	-9	NA	± 30 %	AverageRF
Toluene	10	9.5	1.08	1.02	-5	NA	± 30 %	AverageRF
trans-1,2-Dichloroethene	10	9.3	0.270	0.251	-7	NA	± 30 %	AverageRF
trans-1,3-Dichloropropene	10	9.8	0.617	0.606	-2	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	9.5	0.270	0.256	-5	NA	± 30 %	AverageRF
Trichlorofluoromethane	10	10	0.242	0.248	3	NA	± 30 %	AverageRF
Vinyl Acetate	20	21	0.647	0.679	5	NA	± 30 %	AverageRF
Vinyl Chloride	10	9.8	0.315	0.307	-2	NA	± 30 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/23/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

ICAL ID: CAL1263  
 Instrument ID: MS10

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS10\DATA\2007_03\23\0323014.D	F	J:\MS10\DATA\2007_03\23\0323019.D
B	J:\MS10\DATA\2007_03\23\0323015.D	G	J:\MS10\DATA\2007_03\23\0323020.D
C	J:\MS10\DATA\2007_03\23\0323016.D	H	J:\MS10\DATA\2007_03\23\0323021.D
D	J:\MS10\DATA\2007_03\23\0323017.D	I	J:\MS10\DATA\2007_03\23\0323022.D
E	J:\MS10\DATA\2007_03\23\0323018.D		

Analyte Name	Level A			Level B			Level C			Level D			Level E		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
1,1,1,2-Tetrachloroethane	A	0.50	0.199	B	1.0	0.258	C	2.0	0.268	D	5.0	0.280	E	10	0.292
	F	20	0.302	G	50	0.312	H	100	0.352	I	200	0.306			
1,1,1-Trichloroethane (TCA)	A	0.50	0.207	B	1.0	0.279	C	2.0	0.278	D	5.0	0.289	E	10	0.297
	F	20	0.306	G	50	0.306	H	100	0.335	I	200	0.313			
1,1,2,2-Tetrachloroethane	A	0.50	1.06	B	1.0	1.19	C	2.0	1.18	D	5.0	1.21	E	10	1.24
	F	20	1.21	G	50	1.20	H	100	1.28	I	200	0.956			
1,1,2-Trichloroethane	A	0.50	0.286	B	1.0	0.319	C	2.0	0.324	D	5.0	0.334	E	10	0.338
	F	20	0.340	G	50	0.335	H	100	0.369	I	200	0.342			
1,1,2-Trichlorotrifluoroethane				B	1.0	0.107	C	2.0	0.109	D	5.0	0.113	E	10	0.11
	F	20	0.115	G	50	0.114	H	100	0.128	I	200	0.117			
1,1-Dichloroethane	A	0.50	0.463	B	1.0	0.563	C	2.0	0.565	D	5.0	0.561	E	10	0.569
	F	20	0.576	G	50	0.565	H	100	0.611	I	200	0.534			
1,1-Dichloroethylene	A	0.50	0.150	B	1.0	0.180	C	2.0	0.179	D	5.0	0.185	E	10	0.181
	F	20	0.185	G	50	0.181	H	100	0.202	I	200	0.189			
1,1-Dichloropropene	A	0.50	0.262	B	1.0	0.351	C	2.0	0.358	D	5.0	0.355	E	10	0.372
	F	20	0.382	G	50	0.373	H	100	0.414	I	200	0.379			
1,2,3-Trichlorobenzene	A	0.50	0.744	B	1.0	0.922	C	2.0	0.927	D	5.0	0.968	E	10	0.996
	F	20	0.968	G	50	0.961	H	100	1.09	I	200	1.04			
1,2,3-Trichloropropane	A	0.50	0.282	B	1.0	0.274	C	2.0	0.294	D	5.0	0.313	E	10	0.316
	F	20	0.315	G	50	0.310	H	100	0.339	I	200	0.276			
1,2,4-Trichlorobenzene	A	0.50	0.861	B	1.0	0.967	C	2.0	0.956	D	5.0	1.03	E	10	1.07
	F	20	1.07	G	50	1.07	H	100	1.21	I	200	1.12			
1,2,4-Trimethylbenzene	A	0.50	2.57	B	1.0	2.99	C	2.0	3.06	D	5.0	3.22	E	10	3.32
	F	20	3.31	G	50	3.34	H	100	3.59	I	200	3.00			
1,2-Dibromo-3-chloropropane	A	1.0	0.278	B	2.0	0.199	C	4.0	0.195	D	10	0.203	E	20	0.199
	F	40	0.204	G	100	0.213	H	200	0.243	I	400	0.231			
1,2-Dibromoethane (EDB)	A	0.50	0.290	B	1.0	0.326	C	2.0	0.323	D	5.0	0.336	E	10	0.349
	F	20	0.358	G	50	0.356	H	100	0.396	I	200	0.376			

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/23/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

ICAL ID: CAL1263  
 Instrument ID: MS10

Column: MS

Analyte Name	Level A			Level B			Level C			Level D			Level E		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
1,2-Dichlorobenzene	A	0.50	1.35	B	1.0	1.55	C	2.0	1.59	D	5.0	1.62	E	10	1.64
	F	20	1.64	G	50	1.63	H	100	1.81	I	200	1.61			
1,2-Dichloroethane (EDC)	A	0.50	0.379	B	1.0	0.411	C	2.0	0.413	D	5.0	0.417	E	10	0.428
	F	20	0.429	G	50	0.421	H	100	0.460	I	200	0.405			
‡ 1,2-Dichloropropane	A	0.50	0.308	B	1.0	0.335	C	2.0	0.342	D	5.0	0.351	E	10	0.363
	F	20	0.366	G	50	0.360	H	100	0.393	I	200	0.357			
1,3,5-Trimethylbenzene	A	0.50	2.39	B	1.0	2.91	C	2.0	3.06	D	5.0	3.16	E	10	3.23
	F	20	3.23	G	50	3.23	H	100	3.49	I	200	2.92			
1,3-Dichlorobenzene	A	0.50	1.39	B	1.0	1.58	C	2.0	1.64	D	5.0	1.62	E	10	1.68
	F	20	1.68	G	50	1.69	H	100	1.86	I	200	1.63			
1,3-Dichloropropane	A	0.50	0.634	B	1.0	0.691	C	2.0	0.728	D	5.0	0.726	E	10	0.745
	F	20	0.749	G	50	0.732	H	100	0.796	I	200	0.728			
1,4-Dichlorobenzene	A	0.50	1.50	B	1.0	1.71	C	2.0	1.65	D	5.0	1.69	E	10	1.72
	F	20	1.71	G	50	1.72	H	100	1.89	I	200	1.64			
2-Chloropropane	A	0.50	0.210	B	1.0	0.273	C	2.0	0.264	D	5.0	0.266	E	10	0.275
	F	20	0.270	G	50	0.264	H	100	0.280	I	200	0.246			
2-Butanone (MEK)	A	2.5	0.179	B	5.0	0.193	C	10	0.182	D	25	0.202	E	50	0.204
	F	100	0.206	G	250	0.205	H	500	0.221	I	1000	0.197			
2-Chlorotoluene	A	0.50	2.90	B	1.0	3.23	C	2.0	3.23	D	5.0	3.30	E	10	3.31
	F	20	3.34	G	50	3.30	H	100	3.56	I	200	3.11			
2-Hexanone	A	2.5	0.338	B	5.0	0.377	C	10	0.414	D	25	0.468	E	50	0.469
	F	100	0.478	G	250	0.460	H	500	0.474	I	1000	0.382			
4-Chlorotoluene	A	0.50	2.68	B	1.0	2.96	C	2.0	2.99	D	5.0	3.07	E	10	3.10
	F	20	3.13	G	50	3.11	H	100	3.36	I	200	2.90			
4-Isopropyltoluene	A	0.50	2.32	B	1.0	2.89	C	2.0	3.00	D	5.0	3.06	E	10	3.12
	F	20	3.17	G	50	3.18	H	100	3.48	I	200	2.88			
4-Methyl-2-pentanone (MIBK)	A	2.5	0.381	B	5.0	0.400	C	10	0.419	D	25	0.466	E	50	0.469
	F	100	0.469	G	250	0.453	H	500	0.464	I	1000	0.355			
Acetone	A	2.5	0.162	B	5.0	0.131	C	10	0.124	D	25	0.123	E	50	0.119
	F	100	0.117	G	250	0.114	H	500	0.123	I	1000	0.112			
Benzene	A	0.50	0.966	B	1.0	1.19	C	2.0	1.20	D	5.0	1.21	E	10	1.23
	F	20	1.24	G	50	1.22	H	100	1.32	I	200	1.19			
Bromobenzene	A	0.50	0.339	B	1.0	0.364	C	2.0	0.383	D	5.0	0.387	E	10	0.402
	F	20	0.412	G	50	0.419	H	100	0.452	I	200	0.350			

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/23/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

ICAL ID: CAL1263  
 Instrument ID: MS10

Column: MS

Analyte Name	Level	ID	Amt	RRF	Level	ID	Amt	RRF	Level	ID	Amt	RRF	Level	ID	Amt	RRF
Bromochloromethane		A	0.50	0.0941		B	1.0	0.117		C	2.0	0.122		D	5.0	0.125
		F	20	0.130		G	50	0.127		H	100	0.144		I	200	0.136
Bromodichloromethane		A	0.50	0.254		B	1.0	0.287		C	2.0	0.292		D	5.0	0.311
		F	20	0.338		G	50	0.345		H	100	0.389		I	200	0.368
† Bromoform						B	1.0	0.121		C	2.0	0.122		D	5.0	0.145
						F	20	0.171		G	50	0.189				
Bromomethane						B	1.0	0.113		C	2.0	0.103		D	5.0	0.0973
						F	20	0.0981		G	50	0.0799		H	100	0.0752
Carbon Disulfide		A	1.0	0.609		B	2.0	0.733		C	4.0	0.706		D	10	0.713
		F	40	0.730		G	100	0.710		H	200	0.776		I	400	0.707
Carbon Tetrachloride		A	0.50	0.142		B	1.0	0.190		C	2.0	0.196		D	5.0	0.206
		F	20	0.225		G	50	0.227								
† Chlorobenzene		A	0.50	0.887		B	1.0	1.00		C	2.0	1.05		D	5.0	1.03
		F	20	1.07		G	50	1.06		H	100	1.16		I	200	1.04
Chloroethane		A	0.50	0.107		B	1.0	0.113		C	2.0	0.103		D	5.0	0.103
		F	20	0.107		G	50	0.0945		H	100	0.0949				
† Chloroform		A	0.50	0.367		B	1.0	0.441		C	2.0	0.441		D	5.0	0.445
		F	20	0.464		G	50	0.458		H	100	0.508		I	200	0.469
† Chloromethane		A	0.50	0.313		B	1.0	0.308		C	2.0	0.282		D	5.0	0.282
		F	20	0.297		G	50	0.268		H	100	0.266		I	200	0.248
cis-1,2-Dichloroethene		A	0.50	0.234		B	1.0	0.278		C	2.0	0.288		D	5.0	0.287
		F	20	0.294		G	50	0.292		H	100	0.325		I	200	0.303
cis-1,3-Dichloropropene		A	0.50	0.319		B	1.0	0.375		C	2.0	0.385		D	5.0	0.430
		F	20	0.482												
Dibromochloromethane						B	1.0	0.219		C	2.0	0.236		D	5.0	0.254
						F	20	0.296		G	50	0.310				
Dibromomethane		A	0.50	0.146		B	1.0	0.161		C	2.0	0.174		D	5.0	0.176
		F	20	0.180		G	50	0.180		H	100	0.200		I	200	0.185
Dichlorodifluoromethane		A	0.50	0.206		B	1.0	0.213		C	2.0	0.227		D	5.0	0.231
		F	20	0.258		G	50	0.241		H	100	0.255		I	200	0.227
Ethylbenzene		A	0.50	0.439		B	1.0	0.553		C	2.0	0.572		D	5.0	0.560
		F	20	0.601		G	50	0.603		H	100	0.651		I	200	0.525
Hexachlorobutadiene		A	0.50	0.317		B	1.0	0.418		C	2.0	0.414		D	5.0	0.443
		F	20	0.419		G	50	0.405		H	100	0.457		I	200	0.437

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/23/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

ICAL ID: CAL1263  
 Instrument ID: MS10

Column: MS

Analyte Name	Level A			Level B			Level C			Level D			Level E		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Isopropylbenzene	A	0.50	1.27	B	1.0	1.61	C	2.0	1.66	D	5.0	1.67	E	10	1.73
	F	20	1.78	G	50	1.76	H	100	1.88	I	200	1.59			
m,p-Xylenes	A	1.0	0.561	B	2.0	0.672	C	4.0	0.685	D	10	0.703	E	20	0.723
	F	40	0.741	G	100	0.744	H	200	0.767	I	400	0.560			
o-Xylene	A	0.50	0.535	B	1.0	0.653	C	2.0	0.676	D	5.0	0.690	E	10	0.717
	F	20	0.727	G	50	0.734	H	100	0.793	I	200	0.649			
Methyl tert-Butyl Ether	A	1.0	0.841	B	2.0	0.900	C	4.0	0.911	D	10	0.955	E	20	0.953
	F	40	0.967	G	100	0.961	H	200	1.06	I	400	0.947			
Methylene Chloride	A	0.50	0.252	B	1.0	0.288	C	2.0	0.281	D	5.0	0.285	E	10	0.287
	F	20	0.287	G	50	0.281	H	100	0.309	I	200	0.287			
n-Butylbenzene	A	0.50	2.60	B	1.0	3.30	C	2.0	3.23	D	5.0	3.36	E	10	3.49
	F	20	3.50	G	50	3.49	H	100	3.72	I	200	3.12			
n-Propylbenzene	A	0.50	3.88	B	1.0	4.85	C	2.0	5.00	D	5.0	5.07	E	10	5.12
	F	20	5.20	G	50	5.16	H	100	4.97	I	200	3.28			
Naphthalene	A	0.50	2.38	B	1.0	2.65	C	2.0	2.67	D	5.0	2.92	E	10	2.97
	F	20	2.94	G	50	2.98	H	100	3.36	I	200	3.14			
sec-Butylbenzene	A	0.50	2.98	B	1.0	3.73	C	2.0	3.72	D	5.0	3.84	E	10	3.93
	F	20	3.94	G	50	3.89	H	100	4.18	I	200	3.50			
Styrene	A	0.50	0.816	B	1.0	0.955	C	2.0	1.02	D	5.0	1.10	E	10	1.18
	F	20	1.24												
tert-Butylbenzene	A	0.50	1.91	B	1.0	2.32	C	2.0	2.41	D	5.0	2.41	E	10	2.47
	F	20	2.46	G	50	2.43	H	100	2.71	I	200	2.35			
Tetrachloroethene (PCE)	A	0.50	0.194	B	1.0	0.239	C	2.0	0.241	D	5.0	0.238	E	10	0.249
	F	20	0.252	G	50	0.248	H	100	0.277	I	200	0.257			
Toluene	A	0.50	0.804	B	1.0	0.978	C	2.0	0.992	D	5.0	0.981	E	10	1.01
	F	20	1.04	G	50	1.02	H	100	1.12	I	200	1.02			
trans-1,2-Dichloroethene	A	0.50	0.199	B	1.0	0.238	C	2.0	0.240	D	5.0	0.242	E	10	0.246
	F	20	0.249	G	50	0.244	H	100	0.271	I	200	0.250			
trans-1,3-Dichloropropene	A	0.50	0.391	B	1.0	0.456	C	2.0	0.478	D	5.0	0.532	E	10	0.571
	F	20	0.608												
Trichloroethene (TCE)	A	0.50	0.205	B	1.0	0.252	C	2.0	0.249	D	5.0	0.258	E	10	0.258
	F	20	0.262	G	50	0.262	H	100	0.286	I	200	0.265			
Trichlorofluoromethane	A	0.50	0.153	B	1.0	0.153	C	2.0	0.155	D	5.0	0.183	E	10	0.216
	F	20	0.224	G	50	0.222									

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/23/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

ICAL ID: CAL1263  
 Instrument ID: MS10

Column: MS

Analyte Name	Level A			Level B			Level C			Level D			Level E		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Vinyl Acetate	A	1.0	0.442	B	2.0	0.480	C	4.0	0.485	D	10	0.513	E	20	0.605
	F	40	0.566	G	100	0.561	H	200	0.658	I	400	0.633			
Vinyl Chloride	A	0.50	0.223	B	1.0	0.233	C	2.0	0.224	D	5.0	0.221	E	10	0.244
	F	20	0.235	G	50	0.212	H	100	0.208	I	200	0.182			
Dibromofluoromethane	A	1.0	0.191	B	2.0	0.215	C	4.0	0.214	D	5.0	0.226	E	10	0.223
	F	20	0.226	G	30	0.226									
Toluene-d8	A	1.0	1.15	B	2.0	1.24	C	4.0	1.30	D	5.0	1.34	E	10	1.30
	F	20	1.33	G	30	1.31									
4-Bromofluorobenzene	A	1.0	0.494	B	2.0	0.535	C	4.0	0.545	D	5.0	0.568	E	10	0.552
	F	20	0.580	G	30	0.565									

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/23/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

ICAL ID: CAL1263  
 Instrument ID: MS10

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
1,1,1,2-Tetrachloroethane	TRG	AverageRF	% RSD	14.8		≤ 15	0.285		
1,1,1-Trichloroethane (ICA)	MS	AverageRF	% RSD	12.4		≤ 15	0.290		
† 1,1,2,2-Tetrachloroethane	IRG	AverageRF	% RSD	8.6		≤ 15	1.17		
1,1,2-Trichloroethane	IRG	AverageRF	% RSD	6.7		≤ 15	0.332		
1,1,2-Trichlorotrifluoroethane	IRG	AverageRF	% RSD	5.5		≤ 15	0.115		
† 1,1-Dichloroethane	MS	AverageRF	% RSD	7.2		≤ 15	0.556		
‡ 1,1-Dichloroethene	MS	AverageRF	% RSD	7.6		≤ 30	0.181		
1,1-Dichloropropene	IRG	AverageRF	% RSD	11.5		≤ 15	0.361		
1,2,3-Trichlorobenzene	IRG	AverageRF	% RSD	10.0		≤ 15	0.957		
1,2,3-Trichloropropane	IRG	AverageRF	% RSD	7.3		≤ 15	0.302		
1,2,4-Trichlorobenzene	IRG	AverageRF	% RSD	9.7		≤ 15	1.04		
1,2,4-Trimethylbenzene	TRG	AverageRF	% RSD	9.2		≤ 15	3.16		
1,2-Dibromo-3-chloropropane	IRG	AverageRF	% RSD	12.7		≤ 15	0.219		
1,2-Dibromoethane (EDB)	IRG	AverageRF	% RSD	9.1		≤ 15	0.346		
1,2-Dichlorobenzene	IRG	AverageRF	% RSD	7.4		≤ 15	1.60		
1,2-Dichloroethane (EDC)	MS	AverageRF	% RSD	5.2		≤ 15	0.418		
† 1,2-Dichloropropane	MS	AverageRF	% RSD	6.7		≤ 30	0.353		
β-Trimethylbenzene	MS	AverageRF	% RSD	10.1		≤ 15	3.07		
1,3-Dichlorobenzene	MS	AverageRF	% RSD	7.5		≤ 15	1.64		
1,3-Dichloropropane	IRG	AverageRF	% RSD	6.1		≤ 15	0.725		
1,4-Dichlorobenzene	IRG	AverageRF	% RSD	5.9		≤ 15	1.69		
2,2-Dichloropropane	IRG	AverageRF	% RSD	8.2		≤ 15	0.261		
2-Butanone (MEK)	IRG	AverageRF	% RSD	6.5		≤ 15	0.199		
2-Chlorotoluene	IRG	AverageRF	% RSD	5.5		≤ 15	3.25		
2-Hexanone	TRG	AverageRF	% RSD	12.2		≤ 15	0.429		
4-Chlorotoluene	IRG	AverageRF	% RSD	6.1		≤ 15	3.03		
4-Isopropyltoluene	IRG	AverageRF	% RSD	10.5		≤ 15	3.01		
4-Methyl-2-pentanone (MIBK)	IRG	AverageRF	% RSD	10.1		≤ 15	0.431		
Acetone	IRG	AverageRF	% RSD	12.0		≤ 15	0.125		
Benzene	MS	AverageRF	% RSD	7.9		≤ 15	1.20		
Bromobenzene	IRG	AverageRF	% RSD	9.2		≤ 15	0.390		
Bromochloromethane	IRG	AverageRF	% RSD	11.1		≤ 15	0.125		
Bromodichloromethane	IRG	AverageRF	% RSD	13.1		≤ 15	0.323		
† Bromoform	IRG	AverageRF	% RSD	17.8	*	≤ 15	0.151		
Bromomethane	IRG	AverageRF	% RSD	14.1		≤ 15	0.0958		
Carbon Disulfide	IRG	AverageRF	% RSD	6.2		≤ 15	0.711		
Carbon Tetrachloride	IRG	AverageRF	% RSD	14.5		≤ 15	0.200		
† Chlorobenzene	MS	AverageRF	% RSD	6.9		≤ 15	1.04		
Chloroethane	IRG	AverageRF	% RSD	6.6		≤ 15	0.104		
‡ Chloroform	MS	AverageRF	% RSD	8.3		≤ 30	0.450		
† Chloromethane	IRG	AverageRF	% RSD	7.5		≤ 15	0.285		
cis-1,2-Dichloroethene	TRG	AverageRF	% RSD	8.4		≤ 15	0.288		

Res - tagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 ICAL Date: 03/23/2007

**Initial Calibration Summary**  
**Volatile Organic Compounds**

ICAL ID: CAL1263  
 Instrument ID: MS10

Column: MS

Analyte Name	Compound Type	Calibration Evaluation				RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q
cis-1,3-Dichloropropene	TRG	AverageRF	% RSD	14.9		≤ 15	0.409	
Dibromochloromethane	IRG	AverageRF	% RSD	13.3		≤ 15	0.265	
Dibromomethane	IRG	AverageRF	% RSD	8.6		≤ 15	0.176	
Dichlorodifluoromethane	IRG	AverageRF	% RSD	7.9		≤ 15	0.234	
Ethylbenzene	MS	AverageRF	% RSD	10.5		≤ 15	0.565	
Hexachlorobutadiene	IRG	AverageRF	% RSD	9.7		≤ 15	0.416	
Isopropylbenzene	IRG	AverageRF	% RSD	10.4		≤ 15	1.66	
m,p-Xylenes	IRG	AverageRF	% RSD	11.1		≤ 15	0.684	
o-Xylene	IRG	AverageRF	% RSD	10.5		≤ 15	0.686	
Methyl tert-Butyl Ether	MS	AverageRF	% RSD	6.3		≤ 15	0.944	
Methylene Chloride	TRG	AverageRF	% RSD	5.2		≤ 15	0.284	
n-Butylbenzene	IRG	AverageRF	% RSD	9.7		≤ 15	3.31	
n-Propylbenzene	IRG	AverageRF	% RSD	14.3		≤ 15	4.72	
Naphthalene	IRG	AverageRF	% RSD	10.0		≤ 15	2.89	
sec-Butylbenzene	IRG	AverageRF	% RSD	9.1		≤ 15	3.75	
Styrene	IRG	AverageRF	% RSD	14.7		≤ 15	1.05	
tert-Butylbenzene	IRG	AverageRF	% RSD	8.8		≤ 15	2.39	
Tetrachloroethene (PCE)	MS	AverageRF	% RSD	9.1		≤ 15	0.244	
Toluene	MS	AverageRF	% RSD	8.4		≤ 30	0.996	
trans-1,2-Dichloroethene	TRG	AverageRF	% RSD	7.9		≤ 15	0.242	
trans-1,3-Dichloropropene	TRG	Quadratic	COD	1.000		≥ 0.99	0.506	
Trichloroethene (TCE)	MS	AverageRF	% RSD	8.5		≤ 15	0.255	
Trichlorofluoromethane	TRG	AverageRF	% RSD	17.3	*	≤ 15	0.192	
Vinyl Acetate	IRG	AverageRF	% RSD	13.5		≤ 15	0.549	
Vinyl Chloride	MS	AverageRF	% RSD	8.3		≤ 30	0.220	
Dibromofluoromethane	SURR	AverageRF	% RSD	5.8		≤ 15	0.218	
Toluene-d8	SURR	AverageRF	% RSD	5.1		≤ 15	1.28	
4-Bromofluorobenzene	SURR	AverageRF	% RSD	5.2		≤ 15	0.548	

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13

**Service Request:** P0700256  
**ICAL Date:** 03/23/2007  
**Date Analyzed:** 03/23/2007

**Second Source Calibration Verification**  
**Volatile Organic Compounds**

**ICAL Type:** Internal Standard  
**Analysis Method:** 8260B

**ICAL ID:** CAL1263  
**Units:** ug/L

**File ID:** J:\MS10\DATA\2007\_03\23\0323027.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	10	10	0.285	0.299	5	NA	± 30 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	10	0.290	0.304	5	NA	± 30 %	AverageRF
† 1,1,2,2-Tetrachloroethane	10	11	1.17	1.24	6	NA	± 30 %	AverageRF
1,1,2-Trichloroethane	10	11	0.332	0.354	7	NA	± 30 %	AverageRF
1,1,2-Trichlorotrisfluoroethane	10	9.7	0.115	0.112	-3	NA	± 30 %	AverageRF
† 1,1-Dichloroethane	10	10	0.556	0.578	4	NA	± 30 %	AverageRF
‡ 1,1-Dichloroethene	10	11	0.181	0.193	7	NA	± 30 %	AverageRF
1,1-Dichloropropene	10	9.2	0.361	0.331	-8	NA	± 30 %	AverageRF
1,2,3-Trichlorobenzene	10	10	0.957	0.993	4	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	10	11	0.302	0.320	6	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	10	1.04	1.07	3	NA	± 30 %	AverageRF
1,2,4-Trimethylbenzene	10	11	3.16	3.34	6	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane	20	18	0.219	0.197	-10	NA	± 30 %	AverageRF
1,2-Dibromoethane (EDB)	10	10	0.346	0.362	5	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	10	10	1.60	1.65	3	NA	± 30 %	AverageRF
† Dichloroethane (EDC)	10	10	0.418	0.429	2	NA	± 30 %	AverageRF
‡ 1,2-Dichloropropene	10	10	0.353	0.363	3	NA	± 30 %	AverageRF
1,3,5-Trimethylbenzene	10	11	3.07	3.23	5	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	10	10	1.64	1.68	3	NA	± 30 %	AverageRF
1,3-Dichloropropene	10	10	0.725	0.754	4	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	10	1.69	1.73	2	NA	± 30 %	AverageRF
2,2-Dichloropropene	10	9.2	0.261	0.239	-8	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	54	0.199	0.216	9	NA	± 30 %	AverageRF
2-Chlorotoluene	10	10	3.25	3.34	3	NA	± 30 %	AverageRF
2-Hexanone	50	57	0.429	0.491	14	NA	± 30 %	AverageRF
4-Chlorotoluene	10	10	3.03	3.05	1	NA	± 30 %	AverageRF
4-Isopropyltoluene	10	10	3.01	3.09	3	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	50	57	0.431	0.491	14	NA	± 30 %	AverageRF
Acetone	50	51	0.125	0.126	1	NA	± 30 %	AverageRF
Benzene	10	10	1.20	1.23	3	NA	± 30 %	AverageRF
Bromobenzene	10	10	0.390	0.402	3	NA	± 30 %	AverageRF
Bromoform	10	10	0.125	0.131	5	NA	± 30 %	AverageRF
Bromomethane	10	10	0.323	0.332	3	NA	± 30 %	AverageRF
† Bromodichloromethane	10	11	0.151	0.164	9	NA	± 30 %	AverageRF
Bromoform	10	10	0.0958	0.0987	3	NA	± 30 %	AverageRF
Carbon Disulfide	20	19	0.711	0.678	-5	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	11	0.200	0.215	7	NA	± 30 %	AverageRF
† Chlorobenzene	10	10	1.04	1.08	4	NA	± 30 %	AverageRF
Chloroethane	10	11	0.104	0.111	7	NA	± 30 %	AverageRF
† Chloroform	10	10	0.450	0.469	4	NA	± 30 %	AverageRF

R = flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

† CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13

**Service Request:** P0700256  
**ICAL Date:** 03/23/2007  
**Date Analyzed:** 03/23/2007

**Second Source Calibration Verification**  
**Volatile Organic Compounds**

**ICAL Type:** Internal Standard  
**Analysis Method:** 8260B

**ICAL ID:** CAL1263  
**Units:** ug/L

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
† Chloromethane	10	10	0.285	0.288	1	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	10	0.288	0.300	4	NA	± 30 %	AverageRF
cis-1,3-Dichloropropene	10	11	0.409	0.440	8	NA	± 30 %	AverageRF
Dibromochloromethane	10	11	0.265	0.293	10	NA	± 30 %	AverageRF
Dibromomethane	10	10	0.176	0.184	5	NA	± 30 %	AverageRF
Dichlorodifluoromethane	10	9.7	0.234	0.228	-3	NA	± 30 %	AverageRF
‡ Ethylbenzene	10	10	0.565	0.588	4	NA	± 30 %	AverageRF
Hexachlorobutadiene	10	11	0.416	0.450	8	NA	± 30 %	AverageRF
Isopropylbenzene	10	10	1.66	1.70	2	NA	± 30 %	AverageRF
m,p-Xylenes	20	21	0.684	0.720	5	NA	± 30 %	AverageRF
o-Xylene	10	10	0.686	0.711	4	NA	± 30 %	AverageRF
Methyl tert-Butyl Ether	20	20	0.944	0.956	1	NA	± 30 %	AverageRF
Methylene Chloride	10	11	0.284	0.300	5	NA	± 30 %	AverageRF
n-Butylbenzene	10	10	3.31	3.31	0	NA	± 30 %	AverageRF
n-Propylbenzene	10	11	4.72	5.00	6	NA	± 30 %	AverageRF
Naphthalene	10	10	2.89	3.01	4	NA	± 30 %	AverageRF
sec-Butylbenzene	10	9.6	3.75	3.61	-4	NA	± 30 %	AverageRF
Styrene	10	10	1.05	1.10	5	NA	± 30 %	AverageRF
tert-Butylbenzene	10	10	2.39	2.45	3	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	9.9	0.244	0.243	-1	NA	± 30 %	AverageRF
† Toluene	10	10	0.996	1.02	2	NA	± 30 %	AverageRF
trans-1,2-Dichloroethene	10	10	0.242	0.245	1	NA	± 30 %	AverageRF
trans-1,3-Dichloropropene	10	9.7	0.506	0.546	NA	-4	± 30 %	Quadratic
Trichloroethene (TCE)	10	10	0.255	0.265	4	NA	± 30 %	AverageRF
Trichlorofluoromethane	10	11	0.192	0.208	8	NA	± 30 %	AverageRF
Vinyl Acetate	20	20	0.549	0.554	1	NA	± 30 %	AverageRF
† Vinyl Chloride	10	11	0.220	0.233	6	NA	± 30 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 Date Analyzed: 03/21/2007

**Continuing Calibration Verification Summary**  
**Volatile Organic Compounds**

ICAL Type:	Internal Standard	ICAL Date:	03/19/2007
Analysis Method:	8260B	ICAL ID:	CAL1262
		Analysis Lot:	PWG0700477
		Units:	ug/L

File ID: J:\MS10\DATA\2007\_03\21\0321003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	10	14		0.226	0.309	37 *	NA	± 30 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	9.9		0.306	0.303	-1	NA	± 30 %	AverageRF
† 1,1,2,2-Tetrachloroethane	10	10	.3	1.31	1.34	2	NA	± 30 %	AverageRF
1,1,2-Trichloroethane	10	10		0.354	0.363	2	NA	± 30 %	AverageRF
1,1,2-Trichlorotrifluoroethane	10	8.9		0.116	0.103	-11	NA	± 30 %	AverageRF
† 1,1-Dichloroethane	10	10	.1	0.633	0.639	1	NA	± 30 %	AverageRF
† 1,1-Dichloroethene	10	9.2		0.209	0.193	-8	NA	± 20 %	AverageRF
1,1-Dichloropropene	10	9.2		0.401	0.368	-8	NA	± 30 %	AverageRF
1,2,3-Trichlorobenzene	10	10		0.935	0.945	1	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	10	9.9		0.338	0.334	-1	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	10		1.03	1.03	0	NA	± 30 %	AverageRF
1,2,4-Trimethylbenzene	10	9.4		3.61	3.39	-6	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane	20	23		0.190	0.221	16	NA	± 30 %	AverageRF
1,1-Dibromoethane (EDB)	10	10		0.357	0.366	3	NA	± 30 %	AverageRF
1,1-Dichlorobenzene	10	10		1.67	1.67	0	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	10		0.473	0.487	3	NA	± 30 %	AverageRF
† 1,2-Dichloropropane	10	10		0.379	0.393	4	NA	± 20 %	AverageRF
1,3,5-Trimethylbenzene	10	9.1		3.53	3.22	-9	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	10	9.8		1.74	1.70	-2	NA	± 30 %	AverageRF
1,3-Dichloropropane	10	9.9		0.786	0.779	-1	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	10		1.79	1.78	0	NA	± 30 %	AverageRF
2,2-Dichloropropane	10	10		0.296	0.305	3	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	51		0.214	0.217	1	NA	± 30 %	AverageRF
2-Chlorotoluene	10	9.2		3.72	3.43	-8	NA	± 30 %	AverageRF
2-Hexanone	50	51		0.484	0.496	3	NA	± 30 %	AverageRF
4-Chlorotoluene	10	9.3		3.47	3.24	-7	NA	± 30 %	AverageRF
4-Isopropyltoluene	10	8.9		3.35	3.00	-11	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	50	53		0.471	0.494	5	NA	± 30 %	AverageRF
Acetone	50	50		0.128	0.128	0	NA	± 30 %	AverageRF
Benzene	10	10		1.30	1.32	2	NA	± 30 %	AverageRF
Bromobenzene	10	11		0.399	0.419	5	NA	± 30 %	AverageRF
Bromochloromethane	10	11		0.128	0.140	9	NA	± 30 %	AverageRF
Bromodichloromethane	10	11		0.325	0.367	13	NA	± 30 %	AverageRF
Bromoform	10	13	.1	0.130	0.170	31 *	NA	± 30 %	AverageRF
Bromomethane	10	12		0.159	0.159	NA	15	± 30 %	Quadratic
Carbon Disulfide	20	19		0.845	0.782	-7	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	12		0.180	0.213	18	NA	± 30 %	AverageRF
Chlorobenzene	10	10	.3	1.10	1.10	0	NA	± 30 %	AverageRF
Chloroethane	10	12		0.155	0.172	NA	15	± 30 %	Quadratic

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13

**Service Request:** P0700256  
**Date Analyzed:** 03/21/2007

**Continuing Calibration Verification Summary**  
**Volatile Organic Compounds**

**ICAL Type:** Internal Standard  
**Analysis Method:** 8260B

**ICAL Date:** 03/19/2007  
**ICAL ID:** CAL1262  
**Analysis Lot:** PWG0700477  
**Units:** ug/L

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
† Chloroform	10	11		0.486	0.511	5	NA	± 20 %	AverageRF
† Chloromethane	10	9.8	1	0.376	0.368	-2	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	10		0.309	0.324	5	NA	± 30 %	AverageRF
cis-1,3-Dichloropropene	10	11		0.479	0.525	10	NA	± 30 %	AverageRF
Dibromochloromethane	10	13		0.230	0.304	32 *	NA	± 30 %	AverageRF
Dibromomethane	10	11		0.186	0.201	8	NA	± 30 %	AverageRF
Dichlorodifluoromethane	10	11		0.157	0.168	7	NA	± 30 %	AverageRF
‡ Ethylbenzene	10	9.5		0.615	0.583	-5	NA	± 20 %	AverageRF
Hexachlorobutadiene	10	8.8		0.420	0.368	-12	NA	± 30 %	AverageRF
Isopropylbenzene	10	9.4		1.82	1.70	-6	NA	± 30 %	AverageRF
m,p-Xylenes	20	19		0.754	0.727	-4	NA	± 30 %	AverageRF
o-Xylene	10	10		0.749	0.746	0	NA	± 30 %	AverageRF
Methyl tert-Butyl Ether	20	20		0.996	1.02	2	NA	± 30 %	AverageRF
Methylene Chloride	10	11		0.311	0.328	5	NA	± 30 %	AverageRF
n-Butylbenzene	10	8.7		3.87	3.37	-13	NA	± 30 %	AverageRF
n-Propylbenzene	10	9.1		5.68	5.15	-9	NA	± 30 %	AverageRF
Naphthalene	10	10		2.96	3.03	2	NA	± 30 %	AverageRF
sec-Butylbenzene	10	8.7		4.27	3.72	-13	NA	± 30 %	AverageRF
Styrene	10	10		1.24	1.26	1	NA	± 30 %	AverageRF
tert-Butylbenzene	10	8.8		2.62	2.30	-12	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	9.3		0.240	0.224	-7	NA	± 30 %	AverageRF
† Toluene	10	9.6		1.08	1.04	-4	NA	± 20 %	AverageRF
trans-1,2-Dichloroethene	10	10		0.270	0.269	0	NA	± 30 %	AverageRF
trans-1,3-Dichloropropene	10	11		0.617	0.652	6	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	9.6		0.270	0.259	-4	NA	± 30 %	AverageRF
Trichlorofluoromethane	10	9.1		0.242	0.219	-9	NA	± 30 %	AverageRF
Vinyl Acetate	20	22		0.647	0.712	10	NA	± 30 %	AverageRF
‡ Vinyl Chloride	10	10		0.315	0.326	3	NA	± 20 %	AverageRF
Dibromofluoromethane	10	12		0.209	0.246	17	NA	± 30 %	AverageRF
Toluene-d8	10	11		1.27	1.36	7	NA	± 30 %	AverageRF
4-Bromofluorobenzene	10	11		0.535	0.565	6	NA	± 30 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 Date Analyzed: 03/21/2007

**Continuing Calibration Verification Summary**  
**Volatile Organic Compounds**

ICAL Type: Internal Standard  
 Analysis Method: 8260B

ICAL Date: 03/19/2007  
 ICAL ID: CAL1262  
 Analysis Lot: PWG0700479  
 Units: ug/L

File ID: J:\MS10\DATA\2007\_03\21\0321020.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	10	13		0.226	0.286	27	NA	± 30 %	AverageRF
1,1,1-Trichloroethane (ICA)	10	9.3		0.306	0.283	-8	NA	± 30 %	AverageRF
1,1,2,2-Tetrachloroethane	10	9.5	3	1.31	1.25	-5	NA	± 30 %	AverageRF
1,1,2-Trichloroethane	10	9.6		0.354	0.340	-4	NA	± 30 %	AverageRF
1,1,2-Trichlorotrifluoroethane	10	9.3		0.116	0.108	-7	NA	± 30 %	AverageRF
1,1-Dichloroethane	10	9.2	.1	0.633	0.582	-8	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	8.8		0.209	0.185	-12	NA	± 20 %	AverageRF
1,1-Dichloropropene	10	8.8		0.401	0.352	-12	NA	± 30 %	AverageRF
1,2,3-Trichlorobenzene	10	10		0.935	0.941	1	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	10	9.2		0.338	0.311	-8	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	9.7		1.03	1.00	-3	NA	± 30 %	AverageRF
1,2,4-Trimethylbenzene	10	8.9		3.61	3.21	-11	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane	20	21		0.190	0.201	6	NA	± 30 %	AverageRF
1,1'-Bromoethane (EDB)	10	9.9		0.357	0.352	-1	NA	± 30 %	AverageRF
1,1-Chlorobenzene	10	9.6		1.67	1.59	-4	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	9.7		0.473	0.459	-3	NA	± 30 %	AverageRF
1,2-Dichloropropane	10	9.7		0.379	0.367	-3	NA	± 20 %	AverageRF
1,3,5-Trimethylbenzene	10	8.7		3.53	3.08	-13	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	10	9.2		1.74	1.59	-8	NA	± 30 %	AverageRF
1,3-Dichloropropane	10	9.4		0.786	0.742	-6	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	9.3		1.79	1.66	-7	NA	± 30 %	AverageRF
2,2-Dichloropropane	10	9.3		0.296	0.273	-8	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	48		0.214	0.205	-4	NA	± 30 %	AverageRF
2-Chlorotoluene	10	8.7		3.72	3.22	-13	NA	± 30 %	AverageRF
2-Hexanone	50	48		0.484	0.467	-4	NA	± 30 %	AverageRF
4-Chlorotoluene	10	8.7		3.47	3.02	-13	NA	± 30 %	AverageRF
4-Isopropyltoluene	10	8.8		3.35	2.93	-13	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	50	50		0.471	0.471	0	NA	± 30 %	AverageRF
Acetone	50	47		0.128	0.121	-5	NA	± 30 %	AverageRF
Benzene	10	9.4		1.30	1.22	-6	NA	± 30 %	AverageRF
Bromobenzene	10	9.9		0.399	0.397	-1	NA	± 30 %	AverageRF
Bromochloromethane	10	10		0.128	0.133	4	NA	± 30 %	AverageRF
Bromodichloromethane	10	10		0.325	0.336	3	NA	± 30 %	AverageRF
Bromoform	10	12	.1	0.130	0.153	18	NA	± 30 %	AverageRF
Bromomethane	10	9.3		0.159	0.131	NA	-7	± 30 %	Quadratic
Carbon Disulfide	20	17		0.845	0.706	-16	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	11		0.180	0.201	12	NA	± 30 %	AverageRF
Chlorobenzene	10	9.3	.3	1.10	1.02	-7	NA	± 30 %	AverageRF
Chloroethane	10	9.1		0.155	0.138	NA	-9	± 30 %	Quadratic

Results flagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 Date Analyzed: 03/21/2007

**Continuing Calibration Verification Summary**  
**Volatile Organic Compounds**

ICAL Type: Internal Standard  
 Analysis Method: 8260B

ICAL Date: 03/19/2007  
 ICAL ID: CAL1262  
 Analysis Lot: PWG0700479  
 Units: ug/L

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Chloroform	10	9.7		0.486	0.471	-3	NA	± 20 %	AverageRF
Chloromethane	10	8.2	.1	0.376	0.308	-18	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	9.6		0.309	0.298	-4	NA	± 30 %	AverageRF
cis-1,3-Dichloropropene	10	10		0.479	0.476	-1	NA	± 30 %	AverageRF
Dibromochloromethane	10	12		0.230	0.273	19	NA	± 30 %	AverageRF
Dibromomethane	10	10		0.186	0.190	2	NA	± 30 %	AverageRF
Dichlorodifluoromethane	10	9.9		0.157	0.156	-1	NA	± 20 %	AverageRF
Ethylbenzene	10	8.9		0.615	0.548	-11	NA	± 20 %	AverageRF
Hexachlorobutadiene	10	9.3		0.420	0.389	-7	NA	± 30 %	AverageRF
Isopropylbenzene	10	8.9		1.82	1.63	-11	NA	± 30 %	AverageRF
m,p-Xylenes	20	18		0.754	0.676	-10	NA	± 30 %	AverageRF
o-Xylene	10	9.1		0.749	0.681	-9	NA	± 30 %	AverageRF
Methyl tert-Butyl Ether	20	20		0.996	0.977	-2	NA	± 30 %	AverageRF
Methylene Chloride	10	9.8		0.311	0.306	-2	NA	± 30 %	AverageRF
n-Butylbenzene	10	8.6		3.87	3.31	-14	NA	± 30 %	AverageRF
n-Propylbenzene	10	8.6		5.68	4.86	-14	NA	± 30 %	AverageRF
Naphthalene	10	9.8		2.96	2.90	-2	NA	± 30 %	AverageRF
sec-Butylbenzene	10	8.6		4.27	3.67	-14	NA	± 30 %	AverageRF
Styrene	10	9.4		1.24	1.17	-6	NA	± 30 %	AverageRF
tert-Butylbenzene	10	8.6		2.62	2.26	-14	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	8.8		0.240	0.211	-12	NA	± 20 %	AverageRF
Toluene	10	8.9		1.08	0.957	-11	NA	± 20 %	AverageRF
trans-1,2-Dichloroethene	10	9.2		0.270	0.248	-8	NA	± 30 %	AverageRF
trans-1,3-Dichloropropene	10	9.7		0.617	0.599	-3	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	9.1		0.270	0.246	-9	NA	± 30 %	AverageRF
Trichlorofluoromethane	10	8.3		0.242	0.200	-17	NA	± 30 %	AverageRF
Vinyl Acetate	20	20		0.647	0.658	2	NA	± 20 %	AverageRF
Vinyl Chloride	10	8.3		0.315	0.261	-17	NA	± 30 %	AverageRF
Dibromofluoromethane	10	12		0.209	0.243	16	NA	± 30 %	AverageRF
Toluene-d8	10	11		1.27	1.39	9	NA	± 30 %	AverageRF
4-Bromofluorobenzene	10	11		0.535	0.571	7	NA	± 30 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

\* SPCC Compound

‡ CCC Compound  
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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 Date Analyzed: 03/23/2007

**Continuing Calibration Verification Summary**  
**Volatile Organic Compounds**

ICAL Type: Internal Standard  
 Analysis Method: 8260B

ICAL Date: 03/23/2007  
 ICAL ID: CAL1263  
 Analysis Lot: PWG0700498  
 Units: ug/L

File ID: J:\MS10\DATA\2007\_03\23\0323027A.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	10	10		0.285	0.299	5	NA	± 30 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	10		0.290	0.304	5	NA	± 30 %	AverageRF
1,1,2,2-Tetrachloroethane	10	11	.3	1.17	1.24	6	NA	± 30 %	AverageRF
1,1,2-Trichloroethane	10	11		0.332	0.354	7	NA	± 30 %	AverageRF
1,1,2-Trichlorotrifluoroethane	10	9.7		0.115	0.112	-3	NA	± 30 %	AverageRF
1,1-Dichloroethane	10	10	.1	0.556	0.578	4	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	11		0.181	0.193	7	NA	± 20 %	AverageRF
1,1-Dichloropropene	10	9.2		0.361	0.331	-8	NA	± 30 %	AverageRF
1,2,3-Trichlorobenzene	10	10		0.957	0.993	4	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	10	11		0.302	0.320	6	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	10		1.04	1.07	3	NA	± 30 %	AverageRF
1,2,4-Trimethylbenzene	10	11		3.16	3.34	6	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane	20	18		0.219	0.197	-10	NA	± 30 %	AverageRF
1,2-Bromoethane (EDB)	10	10		0.346	0.362	5	NA	± 30 %	AverageRF
1-Chlorobenzene	10	10		1.60	1.65	3	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	10		0.418	0.429	2	NA	± 20 %	AverageRF
1,2-Dichloropropane	10	10		0.353	0.363	3	NA	± 30 %	AverageRF
1,3,5-Trimethylbenzene	10	11		3.07	3.23	5	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	10	10		1.64	1.68	3	NA	± 30 %	AverageRF
1,3-Dichloropropane	10	10		0.725	0.754	4	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	10		1.69	1.73	2	NA	± 30 %	AverageRF
2,2-Dichloropropane	10	9.2		0.261	0.239	-8	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	54		0.199	0.216	9	NA	± 30 %	AverageRF
2-Chlorotoluene	10	10		3.25	3.34	3	NA	± 30 %	AverageRF
2-Hexanone	50	57		0.429	0.491	14	NA	± 30 %	AverageRF
4-Chlorotoluene	10	10		3.03	3.05	1	NA	± 30 %	AverageRF
4-Isopropyltoluene	10	10		3.01	3.09	3	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	50	57		0.431	0.491	14	NA	± 30 %	AverageRF
Acetone	50	51		0.125	0.126	1	NA	± 30 %	AverageRF
Benzene	10	10		1.20	1.23	3	NA	± 30 %	AverageRF
Bromobenzene	10	10		0.390	0.402	3	NA	± 30 %	AverageRF
Bromochloromethane	10	10		0.125	0.131	5	NA	± 30 %	AverageRF
Bromodichloromethane	10	10		0.323	0.332	3	NA	± 30 %	AverageRF
Bromoform	10	11	.1	0.151	0.164	9	NA	± 30 %	AverageRF
Bromomethane	10	10		0.0958	0.0987	3	NA	± 30 %	AverageRF
Carbon Disulfide	20	19		0.711	0.678	-5	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	11		0.200	0.215	7	NA	± 30 %	AverageRF
Chlorobenzene	10	10	.3	1.04	1.08	4	NA	± 30 %	AverageRF
Chloroethane	10	11		0.104	0.111	7	NA	± 30 %	AverageRF

Res. \* tagged with an asterisk (\*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound  
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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

Client: GeoSyntec Consultants  
 Project: McKesson/HA0620-13

Service Request: P0700256  
 Date Analyzed: 03/23/2007

**Continuing Calibration Verification Summary**  
**Volatile Organic Compounds**

ICAL Type: Internal Standard  
 Analysis Method: 8260B

ICAL Date: 03/23/2007  
 ICAL ID: CAL1263  
 Analysis Lot: PWG0700498  
 Units: ug/L

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
† Chloroform	10	10		0.450	0.469	4	NA	± 20 %	AverageRF
† Chloromethane	10	10	.1	0.285	0.288	1	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	10		0.288	0.300	4	NA	± 30 %	AverageRF
cis-1,3-Dichloropropene	10	11		0.409	0.440	8	NA	± 30 %	AverageRF
Dibromochloromethane	10	11		0.265	0.293	10	NA	± 30 %	AverageRF
Dibromomethane	10	10		0.176	0.184	5	NA	± 30 %	AverageRF
Dichlorodifluoromethane	10	9.7		0.234	0.228	-3	NA	± 30 %	AverageRF
‡ Ethylbenzene	10	10		0.565	0.588	4	NA	± 20 %	AverageRF
Hexachlorobutadiene	10	11		0.416	0.450	8	NA	± 30 %	AverageRF
Isopropylbenzene	10	10		1.66	1.70	2	NA	± 30 %	AverageRF
m,p-Xylenes	20	21		0.684	0.720	5	NA	± 30 %	AverageRF
o-Xylene	10	10		0.686	0.711	4	NA	± 30 %	AverageRF
Methyl tert-Butyl Ether	20	20		0.944	0.956	1	NA	± 30 %	AverageRF
Methylene Chloride	10	11		0.284	0.300	5	NA	± 30 %	AverageRF
n-Butylbenzene	10	10		3.31	3.31	0	NA	± 30 %	AverageRF
n-Propylbenzene	10	11		4.72	5.00	6	NA	± 30 %	AverageRF
Naphthalene	10	10		2.89	3.01	4	NA	± 30 %	AverageRF
sec-Butylbenzene	10	9.6		3.75	3.61	-4	NA	± 30 %	AverageRF
Styrene	10	10		1.05	1.10	5	NA	± 30 %	AverageRF
tert-Butylbenzene	10	10		2.39	2.45	3	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	9.9		0.244	0.243	-1	NA	± 30 %	AverageRF
‡ Toluene	10	10		0.996	1.02	2	NA	± 20 %	AverageRF
trans-1,2-Dichloroethene	10	10		0.242	0.245	1	NA	± 30 %	AverageRF
trans-1,3-Dichloropropene	10	9.7		0.506	0.546	NA	-4	± 30 %	Quadratic
Trichloroethene (TCE)	10	10		0.255	0.265	4	NA	± 30 %	AverageRF
Trichlorofluoromethane	10	11		0.192	0.208	8	NA	± 30 %	AverageRF
Vinyl Acetate	20	20		0.549	0.554	1	NA	± 30 %	AverageRF
‡ Vinyl Chloride	10	11		0.220	0.233	6	NA	± 20 %	AverageRF
Dibromofluoromethane	10	11		0.218	0.240	10	NA	± 30 %	AverageRF
Toluene-d8	10	11		1.28	1.39	9	NA	± 30 %	AverageRF
4-Bromofluorobenzene	10	11		0.548	0.576	5	NA	± 30 %	AverageRF

Results flagged with an asterisk (\*) indicate values outside control criteria.

‡ SPCC Compound

‡ CCC Compound  
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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Extracted:** 03/21/2007

**Extraction Prep Log**  
**Volatile Organic Compounds**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Extraction Lot:** PWG0700476  
**Level:** Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
IB-1	P0700256-001	03/12/07	03/12/07	5ml	5ml	NA	
CPT-35-50	P0700256-002	03/12/07	03/12/07	5ml	5ml	NA	
CPT-35-63	P0700256-003	03/12/07	03/12/07	5ml	5ml	NA	
CPT-35-75	P0700256-004	03/12/07	03/12/07	5ml	5ml	NA	
CPT-36-61	P0700256-006	03/12/07	03/12/07	5ml	5ml	NA	
IB-1	P0700256-007	03/13/07	03/13/07	5ml	5ml	NA	
CPT-38-62	P0700256-011	03/13/07	03/13/07	5ml	5ml	NA	
Method Blank	PWG0700476-3	NA	NA	5ml	5ml	NA	
Lab Control Sample	PWG0700476-1	NA	NA	5ml	5ml	NA	
Duplicate Lab Control Sample	PWG0700476-2	NA	NA	5ml	5ml	NA	

Results flagged with an asterisk (\*) indicate the holding time was exceeded for the analysis

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## COLUMBIA ANALYTICAL SERVICES, INC.

## QA/QC Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Extracted:** 03/21/2007

**Extraction Prep Log**  
**Volatile Organic Compounds**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Extraction Lot:** PWG0700478  
**Level:** Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
CPT-36-50	P0700256-005	03/12/07	03/12/07	5ml	5ml	NA	
CPT-37-54	P0700256-008	03/13/07	03/13/07	5ml	5ml	NA	
CPT-37-70	P0700256-009	03/13/07	03/13/07	5ml	5ml	NA	
CPT-38-52	P0700256-010	03/13/07	03/13/07	5ml	5ml	NA	
CPT-34-54	P0700256-012	03/13/07	03/13/07	5ml	5ml	NA	
CPT-34-62	P0700256-013	03/13/07	03/13/07	5ml	5ml	NA	
CPT-34-73	P0700256-014	03/13/07	03/13/07	5ml	5ml	NA	
IB-1	P0700256-015	03/14/07	03/14/07	5ml	5ml	NA	
CPI-33-54	P0700256-016	03/14/07	03/14/07	5ml	5ml	NA	
CPI-33-64	P0700256-017	03/14/07	03/14/07	5ml	5ml	NA	
CPI-32-54	P0700256-018	03/14/07	03/15/07	5ml	5ml	NA	
CPI-32-66	P0700256-019	03/14/07	03/14/07	5ml	5ml	NA	
CPI-31-55	P0700256-020	03/14/07	03/14/07	5ml	5ml	NA	
CPI-31-66	P0700256-021	03/14/07	03/14/07	5ml	5ml	NA	
CPT-31-77	P0700256-022	03/14/07	03/14/07	5ml	5ml	NA	
Method Blank	PWG0700478-4	NA	NA	5ml	5ml	NA	
CPT-37-70MS	PWG0700478-1	03/13/07	03/13/07	5ml	5ml	NA	
CPT-37-70DMS	PWG0700478-2	03/13/07	03/13/07	5ml	5ml	NA	
Lab Control Sample	PWG0700478-3	NA	NA	5ml	5ml	NA	

Results flagged with an asterisk (\*) indicate the holding time was exceeded for the analysis

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**COLUMBIA ANALYTICAL SERVICES, INC.**

## QA/QC Results

**Client:** GeoSyntec Consultants  
**Project:** McKesson/HA0620-13  
**Sample Matrix:** Water

**Service Request:** P0700256  
**Date Extracted:** 03/23/2007

**Extraction Prep Log**  
**Volatile Organic Compounds**

**Extraction Method:** EPA 5030B  
**Analysis Method:** 8260B

**Extraction Lot:** PWG0700497  
**Level:** Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
CPT-36-50RE	P0700256-005	03/12/07	03/12/07	5ml	5ml	NA	
Method Blank	PWG0700497-3	NA	NA	5ml	5ml	NA	
Lab Control Sample	PWG0700497-1	NA	NA	5ml	5ml	NA	
Duplicate Lab Control Sample	PWG0700497-2	NA	NA	5ml	5ml	NA	

Results flagged with an asterisk (\*) indicate the holding time was exceeded for the analysis

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The logo for Columbia Analytical Services, Inc. It features a stylized triangle composed of three concentric arcs. To the right of the triangle, the company name "Columbia Analytical Services" is written in a serif font, with "INC." in smaller letters at the end. Below the triangle and the company name, the text "An Employee - Owned Company" is printed.

**WATER & SOIL - Chain of Custody Record & Analytical Service Request**

Page 1 of 1

**2655 Park Center Drive, Suite A  
Simi Valley, California 93065  
Phone (805) 526-7161  
Fax (805) 526-7270**

**Report Tier Levels - please select**

Tier 1 - (Results/Default if not specified)

Tier II - (Results + QC)

Tier III - (Data Validation Package) 10% Surcharge

Mer II - (Results + QC) \_\_\_\_\_ Mer V - (client specific) \_\_\_\_\_

MRL required Yes / No

MPL / PCL / J required Yes / No

EDD required Yes / No

Type:

Project Requirements (MBI's QAPPY)

Relinquished by: (Signature)

— 1 —

~~Relying on the Lord~~

Date: 12/1 Time: 15:20 Received by: (Signature)

120-130

Date: 12/6/12 Time: 10:30 Received by: (Signature)

Date: 10/17/2017 Time: 1:20 PM

1990-1991

Date: 1/15 Time: 15:58

— 1 —

Cooler / Blar

1

Ice



**water & sun - Chain of Custody Record & Analytical Service Request**

Page 1 of 1

**2655 Park Center Drive, Suite A  
Simi Valley, California 93065  
Phone (805) 526-7161  
Fax (805) 526-7270**

**Report Tier Levels - please select**

**Tier 1 - (Results/Default If not specified)**

Tier II - (Results + QC)

~~Tier III - (Data Validation Package) 10% Surcharge~~

Tier V - (client specified) \_\_\_\_\_

MRL required Yes / No

MDL / PQL / J required Yes / No

EDD required Yes / No

### Type

## Project Requirements (MRLs, QAPP)

Relinquished by: (Signature) *[Signature]* Date: 3-13 Time: 1605 Received by: (Signature) *[Signature]* Date: 3-13 Time: 1605  
 Relinquished by: (Signature) *[Signature]* Date: 3-13 Time: 1830 Received by: (Signature) *[Signature]* Date: 3-13 Time: 1830 Colder / Blank / Ice / No Ice  
 Relinquished by: (Signature) Date: Time: Received by: (Signature) Date: Time: Temperature \_\_\_\_\_ °C



An Employee-Owned Company

Water & Soil - Chain of Custody Record & Analytical Service Request

Page 1 of 1

**2655 Park Center Drive, Suite A  
Simi Valley, California 93065  
Phone (805) 526-7161  
Fax (805) 526-7270**

**Requested Turnaround Time in Business Days (Surcharges) please circle**

1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day - Standard

CAS Project No.

P0700256

**Report Tier Levels - please select**

Tier 1 - (Results/Default if not specified)

Tier II = (Results ± QG)

Tier III - (Data Validation Package) 10% Surcharge

**Tier V - (client specified)**

MRL required Yes / No

MDL / BDL / -1 required Yes / No

EDD required Yes / No

EDB required for / No  
Type:

### Project Requirements (MRLs, QAPP)

Relinquished by: (Signature) *J. J. H.* Date: 3/19/02 Time: 1357 Received by: (Signature) *J. J. H.* Date: 3/19/02 Time: 1351  
Relinquished by: (Signature) *J. J. H.* Date: 3/19/02 Time: 1355 Received by: (Signature) *J. J. H.* Date: 3/19/02 Time: 1355  
Relinquished by: (Signature) *J. J. H.* Date: Time: Received by: (Signature) *J. J. H.* Date: Time: Cooler / Blank / Ice / Temperature °C.

# SAMPLE RECEIPT FORM

Service Request No: P0700256 Client: Groceryee

Sample(s) delivered by: Client    CAS Emp ✓ After Hours    DHL   

Golden State Overnight    Fed X    UPS    Other Courier   

Chain of Custody filled out accurately? Yes ✓ No    (See Comments)

Appropriate sample volume and containers? Yes ✓ No    (See Comments)

Sufficient labeling on container(s)? Yes ✓ No    (See Comments)

Container(s) supplied by CAS? Yes ✓ No    (See Comments)

Custody seal(s) intact? N/A ✓ Yes    No    (See Comments)

Trip Blank(s) received Yes ✓ No   

Trip Blank was supplied by CAS Yes ✓ No   

Record serial # D308 TB-1

Temperature of sample(s)/cooler 3 °C Temp Blank? Y or N (Circle One)

Voa's Marked Preserved? Yes ✓ No    Filled Properly? Yes ✓ No    (See Comments)

Preserved Bottles Requiring pH check(s)? Yes    Appropriate Preservation? Yes    No   

RUSH Turn around time? Yes    Notified    Date & Time   

Short Hold-Time Analysis (check all that apply)

<b>ASAP</b>	Res Cl <u>  </u>	DO <u>  </u>	Flash <u>  </u>	Diss S2- <u>  </u>	Ferrous Fe <u>  </u>
<b>24HR</b>	pH <u>  </u>	Odor <u>  </u>	Cr+6 <u>  </u>		
<b>48HR</b>	BOD <u>  </u>	Color <u>  </u>	MBAS <u>  </u>	Nitrate <u>  </u>	
	Nitrite <u>  </u>	O-PO4 <u>  </u>	Sett Sol <u>  </u>	Turbidity <u>  </u>	
<b>72HR</b>	Vapors <u>  </u>				

Notified    Date & Time   

Container(s) received and their preservative(s):

-1 = 2.40ml VFA (HCl)

-2 = 6: 3.40ml VFA (HCl)

Comments

# SAMPLE RECEIPT FORM

Service Request No: P070 0256 Client: GEOSYNTEC

Sample(s) delivered by: Client \_\_\_\_\_ CAS Emp ✓ After Hours \_\_\_\_\_ DHL \_\_\_\_\_

Golden State Overnight \_\_\_\_\_ Fed X \_\_\_\_\_ UPS \_\_\_\_\_ Other Courier \_\_\_\_\_

Chain of Custody filled out accurately? Yes ✓ No \_\_\_\_\_ (See Comments)

Appropriate sample volume and containers? Yes ✓ No \_\_\_\_\_ (See Comments)

Sufficient labeling on container(s)? Yes \_\_\_\_\_ No ✓ (See Comments)

Container(s) supplied by CAS? Yes ✓ No \_\_\_\_\_ (See Comments)

Custody seal(s) intact? N/A ✓ Yes \_\_\_\_\_ No \_\_\_\_\_ (See Comments)

Trip Blank(s) received Yes \_\_\_\_\_ No ✓

Trip Blank was supplied by CAS Yes \_\_\_\_\_ No ✓

Record serial # 0308 - TB- 1

Temperature of sample(s)/cooler 3 °C Temp Blank? Y or N (Circle One)

Voa's Marked Preserved? Yes ✓ No \_\_\_\_\_ Filled Properly? Yes ✓ No \_\_\_\_\_ (See Comments)

Preserved Bottles Requiring pH check(s)? Yes \_\_\_\_\_ Appropriate Preservation? Yes \_\_\_\_\_ No \_\_\_\_\_

RUSH Turn around time? Yes \_\_\_\_\_ Notified \_\_\_\_\_ Date & Time \_\_\_\_\_

Short Hold-Time Analysis (check all that apply)

<b>ASAP</b>	Res Cl _____	D.O _____	Flash _____	Diss S2- _____	Ferrous Fe _____
<b>24HR</b>	pH _____	Odor _____	Cr+6 _____		
<b>48HR</b>	BOD _____	Color _____	MBAS _____	Nitrate _____	
	Nitrite _____	O-PO4 _____	Sett Sol _____	Turbidity _____	
<b>72HR</b>	Vapors _____				

Notified \_\_\_\_\_ Date & Time \_\_\_\_\_

Container(s) received and their preservative(s):

- 7 = 2-40ml VOA (HCl)

- 8 → -14 = 3-40ml VOA (HCl)

Comments \_\_\_\_\_

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Initials, Date, Time lk 3/14/07 1519 G:\SMO\LOGFORMS\COOLER.DOC

# SAMPLE RECEIPT FORM

Service Request No: P070 0256 Client: GEOSYNTEC

Sample(s) delivered by: Client  CAS Emp  After Hours  DHL

Golden State Overnight  Fed X  UPS  Other Courier

Chain of Custody filled out accurately? Yes  No  (See Comments)

Appropriate sample volume and containers? Yes  No  (See Comments)

Sufficient labeling on container(s)? Yes  No  (See Comments)

Container(s) supplied by CAS? Yes  No  (See Comments)

Custody seal(s) intact? N/A  Yes  No  (See Comments)

Trip Blank(s) received Yes  No

Trip Blank was supplied by CAS Yes  No

Record serial # 0308 -IB- |

Temperature of sample(s)/cooler 3 °C Temp Blank?  Y or N (Circle One)

Voa's Marked Preserved? Yes  No  Filled Properly? Yes  No  (See Comments)

Preserved Bottles Requiring pH check(s)? Yes  Appropriate Preservation? Yes  No

RUSH Turn around time? Yes  Notified \_\_\_\_\_ Date & Time \_\_\_\_\_

Short Hold-Time Analysis (check all that apply)

ASAP	Res Cl	D.O	Flash	Diss S2-	Ferrous Fe
24HR	pH	Odor	Cr+6		
48HR	BOD	Color	MBAS	Nitrate	
	Nitrite	O-PO4	Sett Sol	Turbidity	
72HR	Vapors				

Notified \_\_\_\_\_ Date & Time \_\_\_\_\_

Container(s) received and their preservative(s):

-15 = 2-40ml VOA (HCl)

-16 → -22 = 3-40ml VOA (HCl)

Comments \_\_\_\_\_

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PL 8/15/07

Initials, Date, Time LF 3/15/07 1045 GASMOLOGFORMS\COOLER.DOC

Columbia Analytical Services, Inc.  
(CAS/Simi Valley)

Client Notification Form

Job Number: P0700256  
Date of Occurrence: 3/14/07  
Analysis: 8260

Client/Project: GEOSYNTEC,  
Contact Name: USA VAN TASSELL  
Project Manager Initials: KR/LK

Nonconformity/Occurrence:

Sample Receipt Information

Missing Sample	COC missing info.	Temperature	Open Valve
Missing Custody Seal	Incorrect Analysis	Preservation	Leaking Canister
Sample ID Problem	Inadequate sample volume	pH	Leaking/Flat Bag
Inappropriate Container	COC/Container discrepancy	X Outside of Hold Time	Other:
Broken/Leaking Sample	Headspace	Canister Pressure	Other:

Analytical Information

Subcontract Sample	MS/MSD	Matrix Interference	Other:
Method/SOP Modification	Surrogate	CCV	Other:
LCS/LCSD	Internal Standard	Report/Results TAT (late)	Other:

Comments: RECEIVED 2 SAMPLES FOR CPT-34-62 & NO SAMPLE FOR CPT-34-54. ON CPT-34-62, 3 VOA'S SAMPLED @ 1510 & 3 @ 1525. VOA'S SAMPLED @ 1510 WOULD MATCH TIME FOR CPT-34-54

Client Notification/Approval:

- 1.) Is client contact necessary? Yes  No   
2.) Acceptable / Proceed with this Analysis Yes  No   
3.) Proceed with all future analyses having the identical Nonconformity/Occurrence Yes  No

Note: Attach any correspondence from client (email, fax, etc.) and submit original to folder.

Outcome/Comments: \_\_\_\_\_

Notified Client by: email  verbally  voicemail

Attempted contact: 3/14/07 (Date) Comment: \_\_\_\_\_

Attempted contact: / (Date) Comment: \_\_\_\_\_

Project Manager: Karen Rha Date of Contact: 3/14/07